Changes in By-Laws Approved at Meeting Of Parts Manufacturers' Association

(Concluded from Page 1, Column 4)

spoke to them about the matter of conducting trade shows.

From the open discussion by members it became apparent that there was a prevailing opinion crystalizing to the effect that the people who make the products and buy the exhibit space should also control the management of the exhibits. This was put into the form of a resolution, which was given unanimous approval, and which reads as follows:

"Resolved that the Refrigeration Supplies and Parts Manufacturers' Association conduct their own exhibit for the year 1938 under their auspices at such time and place as the board of directors may hereafter designate, subject to the best arrangements towards this end which may be worked out with the present exhibit management."

One of the changes made in the by-laws provides tnat the annual meeting of the association shall be held within 60 days of Nov. 1, with the exact date to be decided upon by the board of directors.

Another important change in the by-laws provides that the management of the association shall be vested in a board of directors composed of nine directors, and the president, vice president, and treasurer. The members elect only nine directors in classes of three each for three-year terms, and the officers are elected by the directors either from the directorate or from the membership at large.

All of the officers of the association who have held office during the past year were re-elected: J. D. Colyer of Wolverine Tube Co. as president; J. S. Forbes of Kerotest Mfg. Co. as vice president; and H. V. Higley of Ansul Chemical Co. as secretary-treasurer.

New directors elected at the meeting were D. H. Daskal, Perfection Refrigeration Parts Co.; Edward Gammie, Victor Mfg. & Gasket Co.; R. H. Luscombe, Penn Electric Switch Co.

The firm of Ortman, McClure, Hadden & Co. was re-engaged to manage the affairs of the association, with Richard M. McClure as the firm member who will be active in the Parts Manufacturers Association's affairs.

That part of the by-laws relating to the association's financial setup and dues was changed to read as follows:

"Prior to the beginning of each semi-annual period, the finance committee shall prepare a budget covering the estimated receipts and expenditures for the coming period, and shall present this budget to the directors at the last regular meeting held during the preceding period for which it is to apply.

"The expense of maintaining the association shall be equitably distributed among the members under a schedule of dues approved annually by the board after it shall have approved the budget for the coming year."

No change was made in the dues schedule for the coming year, however.

The basis for amending the by-laws of the association was changed so that the by-laws can be amended, repealed, or altered at any duly organized meeting, provided the proposed change is submitted by mail to each member at least 30 days before the time of the meeting at which the change is to be considered.

At the opening session of the convention the members heard three of their group—Malcomb Henning of Penn Electric Switch, H. V. Higley of Ansul Chemical Co., and R. W. Kritzer of Peerless of America—give talks on "What a Member Should Expect of His Trade Association."

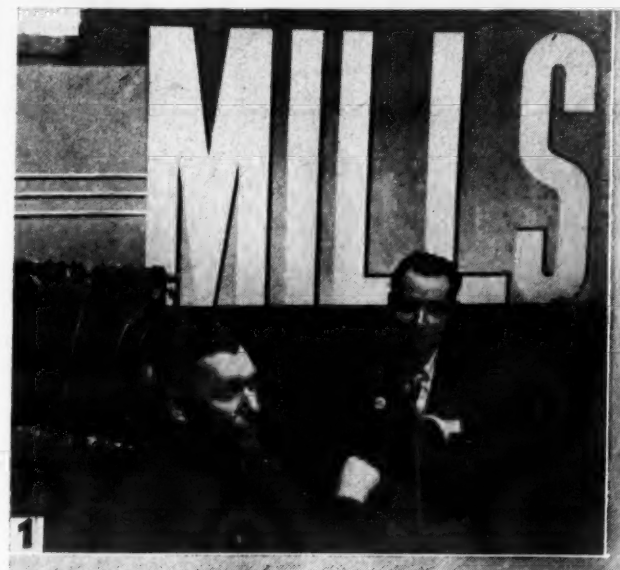
Another speaker at the opening session was Joseph Gooch, Jr., of Gooch & Co., New York, who talked on "How to Make Profits Out of Industry Cooperation."

At the joint banquet tendered by the parts manufacturers to the jobbers on the night of Nov. 2, Frank Wyse, director of public relations for the Bucyrus-Erie Co. and president of the National Industrial Advertisers Association, talked to members of both associations on "How to Get Dividends from a Trade Show."

Mr. Wyse, speaking from his experience as a participant in a great number of trade shows, voiced the opinion that it was best to divorce the management of a convention from the management of the exhibits that was being held simultaneously with the convention. He also presented an outline of what the individual participants could do to publicize a trade show for the purpose of drawing a profitable attendance to it.

Members present at the convention gave approval to a recommendation for members of the association on house policies on good will contributions to local activities of service engineers groups.

Visitors from Distant Points Come to See Exhibits of Parts & Supplies



1. C. O. Blaine of Portland, Ore., and J. D. Driskell of Burley, Idaho, were two far-away visitors to the R.S.E.S. convention in Chicago who stopped in at the Mills Novelty Co. exhibit. 2. In the Weatherhead booth the cameraman got pictures of A. L. Whittemore, O. C. Wilk, and A. J. Burkhard. 3. Henry Rozga and Otto Braun of Acme Refrigeration Co., Milwaukee, inspect the display of coils in the Bush Mfg. Co. booth. 4. D. J. Bowen of Tecumseh; A. J. Kosak, Glen Ellyn, Ill., service engineer; and L. W. Larson of Tecumseh.

Baltimore and Ohio Railroad Leads in Air Conditioning for . . .

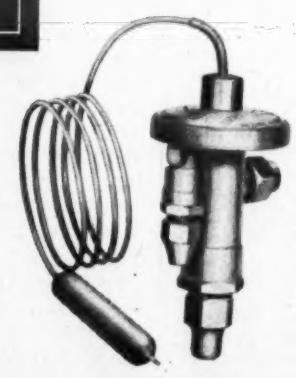
Comfortable Travel . . .

THE "ROYAL BLUE" LATEST in B. & O. AIR CONDITIONED STREAMLINERS IS EQUIPPED WITH (AP) CONTROLS . .

Air Conditioning has done more in the past six years to bring popularity back to Railroad Travel than any other thing. Proof of its growing power is found in the fact that more than 8,000 cars have been Air Conditioned by American Railroads since 1930.

A-P especially salutes B. & O. as the pioneer in Railroad Air Conditioning. The first Air Conditioned Railroad Car put into service in this country was the Martha Washington, equipped by B. & O. in 1930. The first completely Air Conditioned Train used in this country was the B. & O. Columbian, in 1931; and the first completely Air Conditioned long-distance sleeping car train, the National Limited, also of the B. & O., was also equipped in 1932.

The fact that A-P valves are being used by the Baltimore and Ohio Railroad, and operating to complete satisfaction, speaks well for the accuracy, efficiency, and dependability built into these controls.



A-P SOLENOID REFRIGERANT VALVES

Precision built for high flow capacity with low pressure drop. Efficient, durable, of latest design, — with proven performance records.

Model No. 70 NA

A-P THERMOSTATIC EXPANSION VALVES

Leakproof, accurate, built to serve with a minimum of attention. On Test Holds Superheat within a 1.1° Variation. Unquestioned proof of dependability in Air Conditioning and Refrigeration everywhere.

Model No. 210

AUTOMATIC PRODUCTS COMPANY
2450 NORTH THIRTY — SECOND STREET
MILWAUKEE (AP) WISCONSIN

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REFRIGERATION NEWS

Trade Mark Registered U. S. Patent Office. Established 1926 as Electric Refrigeration News
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Light on 1938 Stewart-Warners To Show When Unit Is Running; Economy Story Is Sales Theme

Improved Cabinet Interior Featured in All 9 Models of Line

CHICAGO—In a convention in the Edgewater Beach hotel Nov. 11 and 12, Stewart-Warner Corp. presented to 300 members of its distributing organization a line of electric refrigerators which it hopes will induce the buying public to "See the Light" as to operating economy and efficiency in 1938.

The light with which the company hopes to prove that its 1938 refrigerator "Runs Less—Costs Less" is the Econ-O-Lite, a signal installed in the base of the cabinet near the compressor unit. When the unit is running, the light glows; when it cuts out, the light goes off.

With this device, Stewart-Warner distributors were told, the company has provided them with a visible proof of operating economy. Much use of this feature will be made in telling the public the 1938 Stewart-Warner "economy" story. The Econ-O-Lite will be standard on all units in the 1938 deluxe line.

Nine models are in the line, ranging in size from 4.5 to 7.5 cu. ft. net food storage capacity. The Deluxe

(Continued on Page 14, Column 1)

ASHVE Drafts Plans For Meet Jan. 24-28

NEW YORK CITY—The 44th annual meeting of the American Society of Heating and Ventilating Engineers will be held at the Hotel Biltmore here Jan. 24 to 28, same week in which the American Society of Refrigerating Engineers and the National Warm Air Heating and Air Conditoning Association will meet at Hotel Roosevelt.

Joint sessions will be held during the week with A.S.R.E. and with the heating and air-conditoning group, and the three organizations will participate jointly in some of the entertainment functions.

A.S.H.V.E.'s New York chapter, which will act as host at that organization's meeting, has appointed the following committee on arrangements: chairman, A. C. Buensod; vice chairman, Alfred Engle; reception, W. W. Timmis; banquet, Russell Donnelly; finance, F. E. W. Beebe; ladies, H. W. Fiedler; pub-

(Concluded on Page 24, Column 1)

Refrigerator Plant to Be Transferred to Indianapolis

CHICAGO—Stewart-Warner Corp. will expand its refrigerator manufacturing operations and transfer them from Chicago to Indianapolis, it was revealed Nov. 12 when the company announced that it has brought to an advanced stage negotiations for the purchase, through a subsidiary, of Plant No. 2 of the Marmon Motor Car Co., located in the Indiana capital.

The announcement was timed to coincide with the opening of Stewart-Warner's 1938 refrigerator distributors' convention in the Edgewater Beach hotel here.

By the purchase, Stewart-Warner will acquire 22 acres of land and buildings aggregating 539,000 sq. ft. of floor space. The sale was made by the liquidating trustees of the Marmon company: Otto J. Feucht, Indianapolis; A. A. Anderson, president of Hayes Body Co., Grand Rapids, Mich., and H. H. Davidson, manager of Automotive Credit Service, Inc., Detroit.

As soon as the purchase can be consummated, and the plant reconditioned and machinery installed, Stewart-Warner expects to transfer to Indianapolis refrigerator manufacturing operations, now concentrated in the company's Chicago plants. Officials of the company said that the enlarged facilities are required to meet the increased sale of Stewart-Warner products.

When the Indianapolis plant is placed in full operation, it is anticipated that approximately 2,000 persons will be employed, and that the payroll will exceed $3,000,000 annually. While details of the transfer

(Concluded on Page 24, Column 2)

Pierce Manages G-E Sales To Dept. & Furniture Stores

CLEVELAND—A. E. Pierce has been appointed manager of department and furniture store sales for the appliance and merchandise departments of General Electric Co. and general chairman of the G-E "Clinic," according to a recent announcement.

C. J. Ballus, acting manager whom Mr. Pierce succeeds, and Al Reed will assist Mr. Pierce. Mr. Ballus' office will be in Cleveland; Mr. Reed's in New York City.

San Francisco Air-Conditioning Society Adopts Standards for Human Comfort

SAN FRANCISCO—A code known as "California Standards of Air Conditioning for Human Comfort," calculated to simplify the design and construction of human comfort conditioning installations, has been adopted by The Air-Conditioning Society of San Francisco.

Standardization committee responsible for this code points out that "the experience of engineers, architects, manufacturers, and others interested in the installation and operation of air-conditioning equipment in California has shown that a very great confusion exists in the minds of the public because of the wide variation in capacities of equipment offered for specific installations."

Recognizing that such confusion in the mind of the prospective buyer delays him in obtaining the benefit of equipment to serve his purposes, the society, after reviewing the various codes and standards adopted recently, prepared the California code in an effort to correlate the several points of view.

Because of confusion in the use of technical terms, the society has phrased its standards in non-technical language, "in the hope that those interested will use the terms correctly, and with some sense of proportion, even if they do not achieve the accuracy of the scientist" in their terminology.

Definitions, an important section of code, cover such terms as comfort cooling, comfort zone, compressor, condenser, summer and winter air conditioning, latent heat, sensible and specific heat, and absolute, specific, and relative humidity.

Also defined are dewpoint, dry-bulb and wet-bulb temperatures, as well as various parts of the plant, including evaporators, extended surfaces, unit coolers, unit heaters, etc.

Standards of air conditioning for

(Concluded on Page 11, Column 3)

St. Louis Dealers Agree to Shorter Payment Terms

ST. LOUIS—Shortening of instalment terms and abolition of "no down payment" selling have been provided by an agreement signed and put into effect by the 11 leading local retailers of electrical and gas household appliances.

The agreement is the culmination of a series of conferences of credit managers following the Spokane convention of the National Retail Credit Association, at which revision of instalment terms was advised.

Co-signers of the new code are Union Electric Light & Power Co.;

(Concluded on Page 18, Column 1)

San Antonio Dealers Plan to Expand Association

SAN ANTONIO, Tex.—The Radio and Refrigeration Trades Association is making plans for enlarging its activities and promoting new work in the future, and has appointed a committee to investigate plans for such activities, reports Leon Walthall, secretary-treasurer.

This committee consists of J. B. Gilmer, Southern Equipment Co. (Kelvinator); Albert Rose, Straus-Frank Co. (Frigidaire); and E. R. Moon, Joske Bros. Co. (Frigidaire).

The association, oldest body of its kind in the United States, was founded in 1924 as the Radio Trades Association. Meetings are held every two weeks. Code of ethics of the association, adopted at a recent meeting, reads as follows:

1. To create a spirit of cooperation among those engaged in the distribution of household appliances, and to promote fair, open dealing and friendly competition.

2. To encourage constructive selling, and to discourage at all times

(Concluded on Page 11, Column 5)

Stuart Will Manage General Electric Home Bureau

NEW YORK CITY—Clifford W. Stuart, secretary of General Electric's appliance sales committee and assistant manager of the G-E home bureau, has been named manager of the home bureau by C. E. Wilson, G-E vice president.

Mr. Stuart succeeds Carl M. Snyder, first manager of the bureau, who has been appointed manager of G-E appliance sales.

Mr. Stuart joined the G-E organization 15 years ago as a member of the accounting department at Schenectady. He became a traveling auditor, and later was transferred to the publicity department where he served as assistant manager for several years.

In 1933 he was moved to the company's New York offices to become

(Concluded on Page 24, Column 1)

Clemmer Joins Carrier's International Division

SYRACUSE, N. Y.—J. Neal Clemmer, export manager of Baker Ice Machinery Co. for the past 11 years, has joined the staff of Carrier Corp.'s international division, according to Herbert L. Laube, division vice president.

Mr. Clemmer, who received his engineering training at the University of Omaha, has spent much time in the field, studying air-conditioning and refrigeration needs in South and Central America, the West Indies, Hawaii, the Philippines, and the Orient.

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Norge to Dramatize 1938 Sales Story by Field Demonstrations

Philadelphia Dealers Sell 62,525 Units In 9 Months

PHILADELPHIA—Sales of household electric refrigerators in the territory of Philadelphia Electric Co. during the first nine months of this year increased 15% over those for the same period of 1936, according to reports by distributors and dealers to the utility company.

Sales through September of this year total 62,525 units, compared with 54,230 units in the same period of 1936.

Sales during the third quarter showed gains equal to the average for the year.

Retail value of sales during the nine months also rose 15%, totaling $10,905,165 compared with $9,436,614 during the comparable period of last year. Average price of units sold was $174, the same figure reported for the three-quarter period of last year.

Sales by Philadelphia Electric Co. during the first nine months of this

(Concluded on Page 24, Column 2)

Blood and Knapp Declare Greater Volume Needed To Offset Lower Profit

DETROIT — Dramatic demonstrations which any dealer can make in his own showroom will play an important part in putting across Norge's 1938 electric refrigerator selling story, 550 of the company's distributors and wholesale salesmen learned on Monday and Tuesday of this week, when, in an intensive two-day program of speeches, skits, and demonstrations, they were given a preview of the Norge 1938 "all-appliance" lines and the sales and advertising plans behind them.

Shown to distributors and their field men were 16 new Rollator refrigerator models in three series: a "Standard" line of eight models, ranging from 3.16 to 13.12 cu. ft. capacity; a "Deluxe" line of five models, from 4.17 to 8.11 cu. ft. in size; two "Low Temp" models of 8 and 12 cu. ft. capacity; and a "gasoline - electric" model; seven models of washers and ironers; and six new electric range models.

In opening addresses, Howard E. Blood, president, and John H. Knapp, executive vice president, emphasized that rising production and distribution costs have reduced gross profits in the industry, making additional volume necessary if present profit ratios are to be retained.

The men pointed out that this situation, translated into selling terms, means more intensive efforts

A complete description of Norge's 1938 lines of electric refrigerators, ranges, and laundry equipment, together with key specifications, will be published in next week's News.

will be required on the part of distributors and their sales organizations.

Two major factors must be faced at present, Mr. Blood said. These are:

1. A general and genuine turndown in business.

2. Closer competitive conditions throughout the industry.

In this last category, Mr. Blood spoke particularly of the competition to independent retailers by chain retail store organizations. He stress-

(Continued on Page 10, Column 1)

Crosley Distributors View Refrigerator Line Nov. 29-30

CINCINNATI—The 1938 models of Crosley electric refrigerators and the first line of Crosley gas ranges ever produced will be shown to Crosley distributors Nov. 29 and 30 in the Netherland-Plaza hotel, announces Powel Crosley, Jr., president.

Mr. Crosley also states that a supply of refrigerators will be ready for shipment to distributors on the day following the convention.

Distributors will be welcomed to the convention by President Crosley, who also will present the new models. Among other Crosley officials scheduled to address the meeting are: Lewis M. Crosley, executive vice president; Charles R. D'Olive, newly elected vice president in charge of the refrigeration division; Powel Crosley, III, vice president in charge of the radio division; Thomas W. Berger, general sales manager; Neil Bauer, assistant sales manager; G. Earle Walker, merchandising manager; Glenn H. Corbett, advertising manager.

The convention also will celebrate the opening of Crosley's expansion program, a feature of which is the new refrigeration plant at Richmond, Ind. First unit on this nine-acre site is now in operation.

This 200 x 1,200-ft. plant and its adjoining power house represent an investment of more than $1,000,000. The plant was built in record time, only 126 days having elapsed between the initial clearing of the land and the starting of the production line.

Rome, N.Y., Dealers Seek Better Practices

ROME, N. Y.—A new organization of radio and appliance dealers has been formed here in an attempt to eliminate some of the unethical trade practices which exist in appliance merchandising in this section of the state.

The new organization will work closely with the Utica and Mohawk Valley Electrical Appliance and Radio Dealers' Association.

Court Rules that 'Mechanical Refrigerators Are Not Dangerous' in Deciding Damage Suit

MONTGOMERY, Ala.—By a decision which ruled, in part, that mechanical refrigerators are not imminently or inherently dangerous, the Alabama court of appeals reversed the decision of Colbert circuit court which awarded Mrs. J. F. Castleberry $1,000 damages for injuries allegedly received when a refrigerator which her husband had purchased from Sterchi Bros. Stores, Inc. "exploded" due, supposedly, to a cracked gas pipe.

Besides establishing the general safety of mechanical refrigerators, the high court ruled, in an opinion by Judge James Rice, that no negligence was shown on the part of Sterchi Bros. either in selling or installing the Castleberry's refrigerator.

The court held that demurrers by the defendant company to the original bill of complaint filed by Mrs. Castleberry should have been sustained.

In her suit against Sterchi Bros., Mrs. Castleberry charged negligence by the firm in selling, installing, and refusing to repair the refrigerator. Following the circuit court's decision in Mrs. Castleberry's favor, Sterchi Bros. carried the case to the state court of appeals.

Webb Tells Dept. Store Men That Speciality Selling Is the Way To Move Major Appliances

By Maurice Webb, Manager, General Electric Major Appliances, Strawbridge and Clothier, Philadelphia

SOMETIME around 125,000 years ago, so scientists believe, our caveman ancestors first started to use stone implements. These implements were used to kill game and to cut the game preparatory to eating it raw or, later, to cooking it. Such stone implements are supposed to have been in common use clear up to the comparatively recent period of approximately 5,000 years ago when copper and, later, bronze replaced them.

Now, at rare intervals, somebody in some part of the world uncovers a cave containing just such stone weapons—stone implements that were made in that dim distant past. And of particular interest to you men who are assembled here today to talk about selling kitchen appliances is this fact: that in almost every one of these cases where somebody makes a marvelous find of such stone implements, there is usually found one or more earthen cooking pots, so that the clay cooking pot— the first kitchen utensil, if you please—was used by our ancestors almost as far back as were stone implements.

And it is not so hard for us to imagine that some of those old fellows were able to make clubs, or stone knives, or clay cooking vessels, a little better than some of their neighbors. So Joe Dog-Tooth would swap a cook pot he had made for a year 98,000 B.C. stone hunting knife, that some other hairy fellow didn't want, as badly as he wanted Dog-Tooth's cook pot.

Well, thousands of years went by and Joe Dog-Tooth's descendants were still in the kitchen appliance business. Only where Joe had swapped his clay pot and **then** made himself a new one, these descendants of his were modern. For they made cooking pots **before** they knew they could dispose of them.

And just at about that stage in man's developments there loomed a problem. And that problem is still with us—in fact I have been asked to discuss it here today. It's the same problem Joe Dog-Tooth's earlier descendants had to face:

"What sells kitchen appliances today?"

That question can pretty well be answered by one word. That word solved the problem for the cave-dwelling cooking vessel manufacturers just as it will solve our mutual problem today. That one word is **"salesmanship."**

Now you may say, "Well now, Mr. Webb, that's all very nice. A better application of specialty sales methods may increase my major appliance business. But what about advertising, or terms, for instance? Aren't such things important, too?"

Of course they are.

But the fact remains that department store salespeople, buyers and executives too often know too little about specialty selling—about salesmanship in its highest form.

Most American department stores started as dry goods stores. Most department stores still sell soft goods in tremendous quantities, and with good profit. That partly explains why most department store executives are soft goods men. And such men have a pretty hard time of it to keep up with your new (to them) ideas regarding specialty selling, and advertising, and terms.

CITES STORE'S RECORD

As an example of what specialty sales methods can do towards increasing department store business, permit me to offer the case of Strawbridge & Clothier.

In 1931—a depression year—Strawbridge and Clothier sold 115 General Electric refrigerators.

In 1932—the worst year of the depression—45 General Electric refrigerators were sold.

In March of 1933 I was placed in charge of a distributor-controlled General Electric major appliance resale department. The ensuing use of specialty sales methods, coupled with better business conditions and certain other factors, brought about the following results:

During the first 12 months following the establishment of the G-E resale department, Strawbridge and Clothier sold over nine times—in fact, almost 10 times—the General Electric major appliances that had been sold the preceding 12 months.

Our success that first year was such that the G-E distributor felt impelled to go out and seek other department stores as outlets for G-E merchandise. So that in 1934, the next year, there were four other large department stores selling G-E major appliances in Philadelphia in competition to Strawbridge and Clothier.

Since then still other stores—of greater or less size and importance—have been added to the list of competitors selling G-E appliances. Each store—whether department store or dealer—no doubt takes some business away from us that we might otherwise obtain.

Yet to date this year—that is for the first 10 months up to October 30—we have sold, have had credit passed on, have had delivered, and our G-E salespeople have been paid commissions on approximately $100,000 worth of G-E refrigerators. And we handle seven other makes of refrigerators.

In addition we have sold G-E washers, ironers, cleaners, ranges, unit kitchen cabinets and one dishwasher sink drainboard cabinet combination. General Electric radios have always been handled in a separate radio department.

QUESTIONS ON METHODS

Now, in the rest of the 15 minutes remaining to me, I shall tell you of a few of the things we do at Strawbridge & Clothier's that we know help us get G-E appliance business. But if I tell you department store men what **we** do in some detail it is only fair that you tell me some of the things **you** do to get business. In that way we can get ideas from each other.

Right now my talk becomes very unorthodox. For I'm going to mention some one thing that we do—with one or more reasons why we do it—and then I'm going to ask you men to raise your right hands like this, if you do the same thing or similar in your own stores.

KITCHEN DISPLAY

1. Ever since March of 1933 we have had at least one complete G-E model kitchen on display on our appliance sales floor. Right now we have two such kitchens—one being a G-E Unit Kitchen. How many of you have such a kitchen in the appliance department of your own stores?

(About one fifth of the audience raised hands).

2. Our G-E salespeople sell only G-E merchandise. That makes them better informed and more enthusiastic concerning the appliances they sell. How many follow this system?

(Very few voted yes to this.)

3. We hold morning sales meetings twice a week—on Mondays and Thursdays. Meetings start at 9:00 and end at 9:30 a.m., when the store opens for business. We believe it absolutely necessary to hold morning salesmeetings at least this often when salespeople are to be kept informed on several major appliances and how to sell them.

How many of you men conduct personally, or have conducted by someone else, a minimum of two half hour salesmeetings a week—whether held in the morning as we do or at some other time in the day?

(About one fifth voted yes.)

4. On an average of once a month we ask a G-E factory or G-E distributor contact man to talk or to use G-E slide films at a morning meeting. How many of you do the same?

(About one tenth voted yes.)

5. Strawbridge and Clothier does not at present have any system whereby the deferred payment department notifies us that deferred payment accounts are about paid out. I wish we had such a system. I believe it would permit us to contact people in their homes with the idea of selling them new appliances before their accounts on other appliances or articles were paid out. How many of you are following such a system in your own store?

(About one tenth voted yes.)

COMMISSIONS ONLY

6. Our G-E salespeople are paid straight commission on what they sell—no salaries—no drawing accounts. How many of you pay straight commission only to all, or most all, of your G-E salespeople?

(Only a very few voted yes.)

7. We pay 8% commission on current G-E refrigerators, 5% on what few specials we have been able to get this year. Do you pay as much for inside-outside selling? (A few.)

8. We pay 8% to 10% on G-E wringer washers and 12% on G-E spinner washers. Do you pay as much or more? (A few.)

9. Some stores keep certain salespeople in the stores all the time and require that leads be turned over to outside men for follow-up. We do not follow this plan. We use the same people for floor duty and for follow-up, viz., our G-E salespeople are all inside-outside salespeople.

FLOOR DUTY TIME

10. We schedule our G-E salespeople on floor duty about 60% of the time we expect them to devote to selling. That means we expect them to make follow-up calls at homes of prospects and users during the day or in the evening about 40% of the entire time devoted to selling.

11. We expect all of our G-E salespeople to make follow-up calls at homes of prospects and users. Because Philadelphia is a large city, we believe each salesman must have a car. So for two or three years we have required all G-E salesmen to have cars and we will not hire new salesmen unless they have cars. How many of you have a 100% motorized G-E sales force?

12. Because owning and operating a car costs the salesman money, we try to have our G-E salespeople average $35 a week, or more. Only one man now in the department has averaged less than that this year. The others have averaged about $45 a week. Do your salespeople average $35 a week or more—I refer now to the salespeople you carry through the winter.

13. We require each G-E salesperson to turn in a daily report of calls and contacts made by him or her. We ask for the name and address of every prospect he talked to on the floor with the model number of the appliance he demonstrated. We also ask the same information about home contacts; but in addition we ask whether he talked to husband or wife, whether he got in the house, and whether he inspected the present equipment.

No? Only Telling Them What to Do—But How to Do It

General Electric's Merchandise Clinics are renowned for the fact that the managers of department store major appliance departments who speak at them—either formally or informally—talk straight from the shoulder and don't hold back any of the facts about their own store's operating methods in their discussions.

Such was the character of the talk given by Maurice Webb, manager of the General Electric appliances department of Strawbridge & Clothier, Philadelphia department store, before the G-E Clinic held last week in Cleveland.

Mr. Webb not only came right out and told the other store managers present that "specialty selling" methods were the one track to success in department store appliance merchandising—he backed up his statement with a picture of the methods he has used and the highly successful results that were obtained.

The speaker put his listeners "on the spot" by asking how many of them used the methods he outlined. The answers from the audience are noted for the first eight of his questions—all he had time for in the length of time he was allotted at the Clinic—but the complete manuscript for his talk is being published here.

G-E MOTORS HELP YOU DO 2 JOBS

"This one has a G-E motor —that means it's of high quality electrically, too."
"This refrigerator has never given me any trouble —and it's five years old"

SELL REFRIGERATORS KEEP THEM SOLD

THEY help with the first job by adding to the sales appeal of the refrigerators you sell—by helping to convince prospects that your refrigerators are reliable.

Prospective buyers know that a refrigerator is only as reliable as its motor. They also know that G-E motors have a reputation for giving lasting satisfaction. Thus, the fact that a refrigerator is equipped with a G-E motor—a motor made by a company they know and trust—is sufficient proof to them that the electric equipment is care-free, efficient, and dependable.

The reputation of the refrigerator manufacturer, plus that of G-E motors, makes selling easier—inspires confidence that the units are dependable both mechanically and electrically—are of high quality throughout.

THEY help, too, by operating quietly, efficiently, and with little or no attention, to keep refrigerators sold. Their performance is such that it makes satisfied users, attracts new prospects, and brings back old customers for new purchases. Designed and built by experienced engineers, G-E motors give many years of trouble-free service. Below are given a few of the many reasons why G-E motors are reliable—why millions of washers, refrigerators, stokers, and oil burners are equipped with them.

Cast-aluminum rotor winding that cannot burn out or become open-circuited.

Resilient-rubber mounting that isolates all torque pulsations.

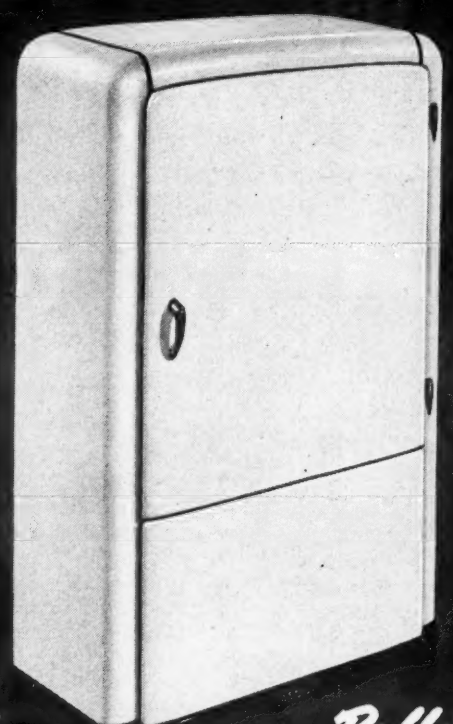
End-play silencers, of durable spring steel, built permanently into the end shields.

General Electric, Schenectady, N. Y.

GENERAL ELECTRIC

Filing No. 9269 070-214

NORGE

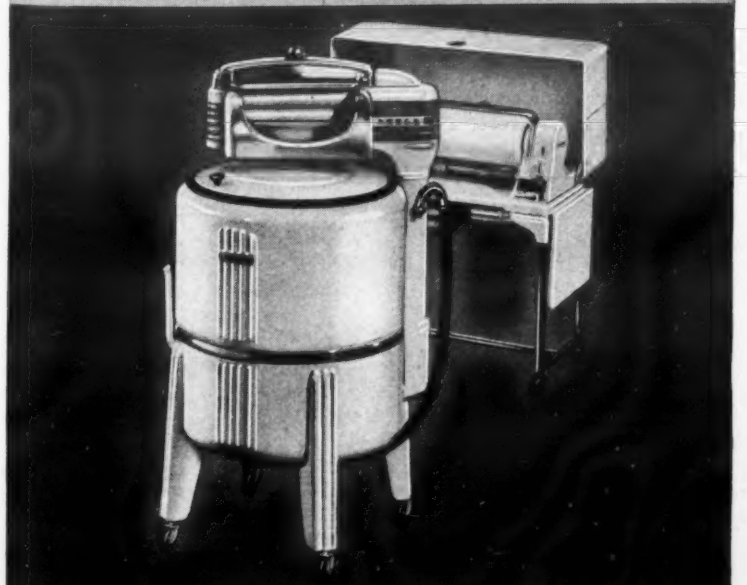


Rollator Refrigeration

Rollator Refrigeration protected by 10-Year Warranty on the three-moving-parts Rollator Compression Unit.

OFFERS YOU *Greater Opportunities* EVERY MONTH IN THE YEAR!

Concentrator Gas + Electric Ranges



Autobuilt Washers and Duotrol Ironers

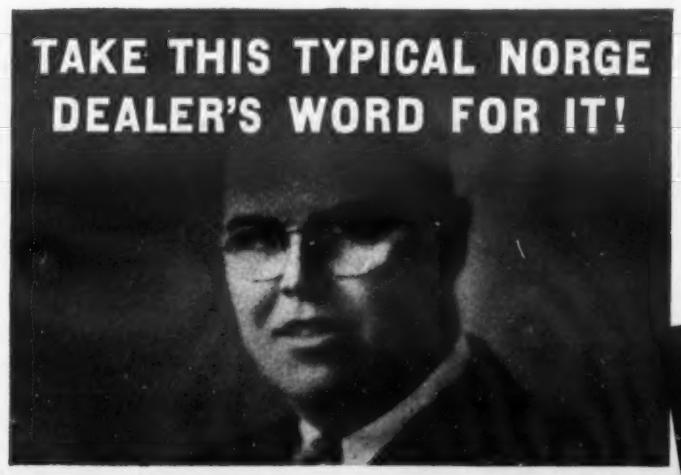
PRODUCT!... Every survey of consumer preference proves that Norge appliances lead in customer satisfaction. And Norge consistently ranks among the first three in public acceptance. The 1938 line is the greatest in Norge history. A new dramatic sales approach will be pushed in all advertising, promotion and store display. Exclusive features in the new Norge line give you the most convincing show room demonstrations you have ever seen.

PROFIT!... Every month is a profit month with Norge Master Merchants. There is always sales activity in the Norge line of Rollator Refrigerators, Concentrator Gas and Electric Ranges, Autobuilt Washers, Duotrol Ironers and package heating and commercial equipment. Get full details now about the smashing new Norge advertising and sales promotion program of *simplified visual selling,* that gives the dealer the break he's been looking for.

TURNOVER!... High product turnover and liberal finance plans keep your capital working for you all the time. Low dealer and salesman turnover proves that men have found it pays to sell Norge and *stick to Norge.* The Norge dealer whose picture appears on this page offers a typical example of the opportunities a Norge franchise offers—a franchise more valuable today than ever before! Get the facts about Norge without delay.

NORGE DIVISION *Borg-Warner Corporation, Detroit, Michigan*

TAKE THIS TYPICAL NORGE DEALER'S WORD FOR IT!



● "There are no off months in the appliance business for an exclusive Norge Master Merchant. By concentrating my entire efforts on the complete Norge line of appliances I actually turned my inventory twelve times in that many months, and was able to show better than a 10% net profit on my year's operation." (NAME ON REQUEST)

FREE! TO APPLIANCE DEALERS!

● A full volume on appliance selling and promotion. One of the greatest dealer helps ever produced. Describes a complete plan of store operation. Tells how to get the most out of advertising and sales promotion. Reveals for the first time a new tested method of visual selling. No matter what products you sell, this book will show you how to make more money in the appliance business.

NORGE DIVISION Borg-Warner Corporation,
658 *East Woodbridge Street, Detroit, Michigan*

I would like to receive a copy of your new book for appliance dealers.

NAME .....

ADDRESS ..... STATE TP-1

CITY .....

MAIL TODAY!

G-E Appliances to Be Used in 152 Homes Being Constructed in Boston Suburb

NEEDHAM GARDENS, Mass.—One hundred and fifty-two homes, priced to sell at $7,990 each, will be constructed in this Boston suburb before the end of 1938. Every one of these homes will be equipped with a General Electric range, dishwasher, and Disposall, and will be completely air conditioned.

The first group of homes already is under construction, and some of them will be ready for sale this fall. Each builder who accepts a job in the project area must agree to equip all kitchens with G-E products.

Home Merchandising Corp., which is in charge of the construction, has contracted with W. L. Thompson, Inc., Boston G-E distributor, for the G-E equipment for the 152 kitchens.

An extensive advertising and publicity campaign using newspapers, billboards, directional signs, and radio has been planned by Home Merchandising Corp. in conjunction with Gar Wood and Edison companies. The corporation has contracted for a radio broadcast immediately following G-E's Hour of Charm program on Monday evenings.

W. L. Thompson, Inc., also is working with another builder who is contemplating construction of 30 homes in Colonial Acres in Newton, Mass. Each of these homes is to include a General Electric B-7 refrigerator, M-44 electric sink, Disposall, and G-24 range.

Irwin Directs Publicity For Dayton Fund Drive

DAYTON—James W. Irwin, director of public relations for the Frigidaire and Dayton divisions of General Motors Corp., has been named chairman of the publicity and promotion committee for the Dayton Community Chest drive.

Assisting Mr. Irwin on the committee will be Edward Bozorth, advertising manager of Airtemp, Inc.; Milton Schwartz of Lord & Thomas advertising agency; E. G. Frost of Geyer, Cornell & Newell agency; R. L. Wetzel, advertising manager of Dayton Rubber Co.; and Frank C. Lyons, assistant public relations director of Frigidaire.

10 Electroluxes Installed In Houston Tourist Camp

HOUSTON, Tex.—Ten Servel Electrolux gas refrigerators have been installed by Modern Appliances, Inc., local Servel dealer, in The Oaks, tourist camp on a main highway between here and Galveston.

The camp has 100 cabins, all of which eventually will be equipped with a Servel Electrolux unit, according to the plans of the owners.

The initial sale was made by Sam Minschen, sales manager of Modern Appliances, Inc.'s Harrisburg road branch. Mr. Minschen finds that tenants of the camp who use the refrigerators are good prospects when they move into Houston.

MacDonald Will Manage G-E Sales in Dallas, Bowe in St. Louis

CLEVELAND—R. V. MacDonald, district appliance sales manager for General Electric Co. in St. Louis since 1933, has been transferred to Dallas in a similar capacity, announces Ralph J. Cordiner, assistant manager of the G-E appliance and merchandising department. Mr. MacDonald will succeed F. W. Wheeler, who relinquishes his position in Dallas to assume other duties with the appliance sales organization.

B. C. Bowe, who has been district manager of radio sales for General Electric in St. Louis, has been appointed district appliance sales manager to succeed Mr. MacDonald.

Mr. MacDonald, who before he enlisted in the air service during the war covered the whole state of Montana for the Butte Electric Supply Co., has more recently been radio manager for G-E Supply Corp. in San Francisco and district appliance sales manager in Kansas City, later being transferred to St. Louis.

Mr. Bowe became district radio sales manager for the company in St. Louis in 1936. He has been connected with General Electric since 1909 and is a graduate of the student engineering course. His earlier activities were with arc lamp sales at Schenectady and as a Tungar specialist in Chicago.

He was appointed manager of the Tungar sales section at Bridgeport in 1924, and when the radio sales section was formed in 1930, he became associated with its activities.

Cleveland Better Business Bureau Drafts Code of Advertising Standards for Use of Appliance Dealers

CLEVELAND—Designed to help eliminate unfair and objectionable trade practices from the appliance selling business, a code of proposed advertising standards for home appliance promotion is to be submitted for adoption to the trade here by the Cleveland Better Business Bureau.

The proposed code, basis of a precensorship program which is intended for application to all forms of advertising, would prohibit all price comparisons except with former established prices on the advertised merchandise, ban specific reference to trade-in allowances, and provide for enforcement of resale price contracts filed under the Ohio fair trade act.

Advertising standards included in the proposed code are:

1. No false, untrue, or misleading statement, illustration, or layout shall be used in home appliance advertising.
2. The words "free" or "given away" or other words or phrases having a similar meaning shall be eliminated.
3. References to cut prices on certain makes of appliances must clearly indicate the specific make and model of appliance affected.
4. Statements claiming continual policy of underselling competitors must be eliminated.
5. Statements claiming savings in purchase price must be eliminated except when amount of saving is specifically set forth with adequate proof.
6. No price comparisons shall be used except with former price of particular product concerned.
7. Definite dollar and cent trade-in offers shall be eliminated.
8. Such phrases as "no finance charge" or "no carrying charge" will not be permitted.
9. Advertising violating the Ohio fair trade act will not be permitted.

Cleveland Wholesale Appliance Association took the first step in the drafting of the proposed code last summer by asking William M. Farrar, general manager of the Cleveland Better Business Bureau, to work out a plan similar to the one affecting the jewelry and radio retail advertising in the city.

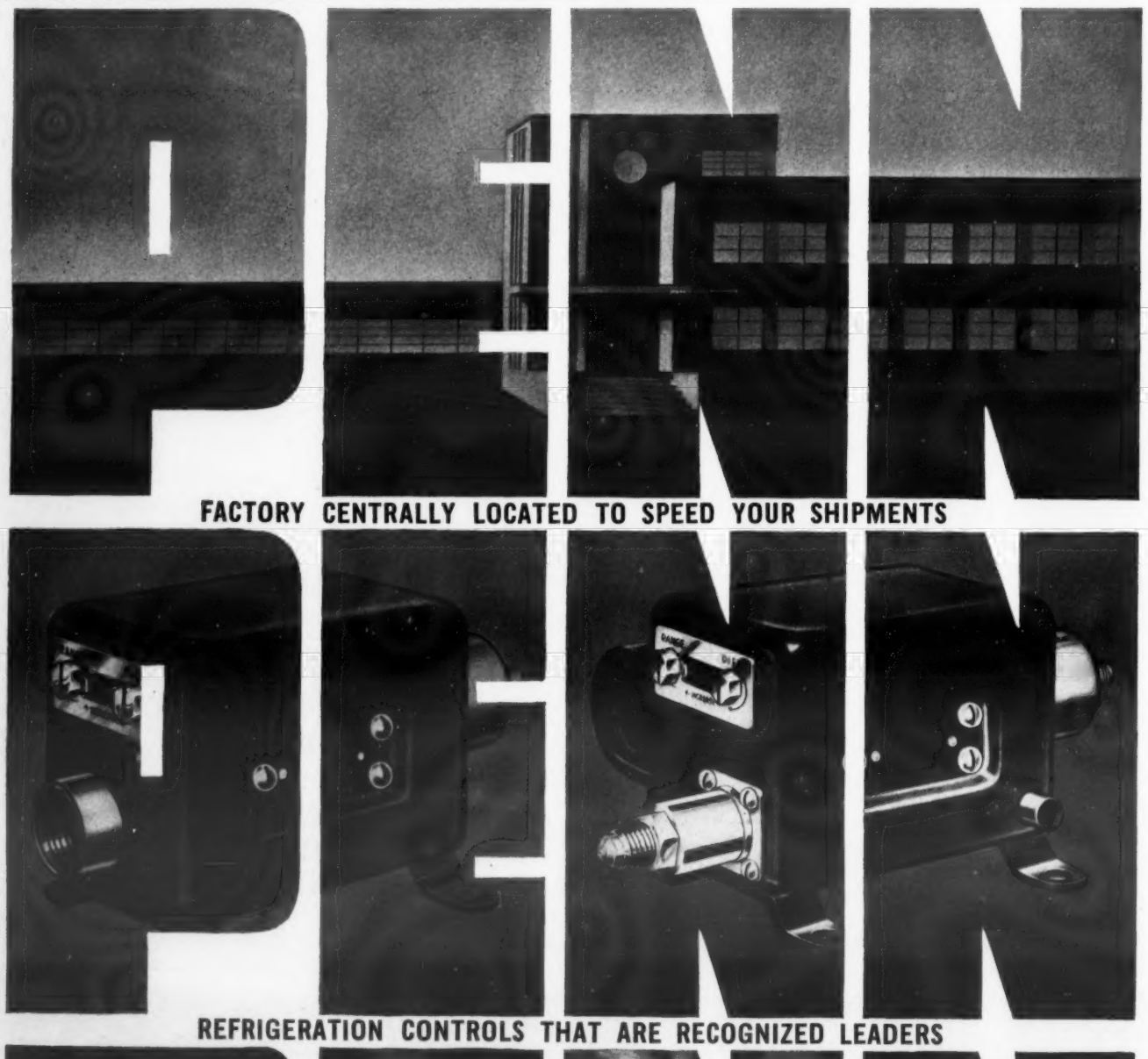
Mr. Farrar and a committee of three members of the association, C. H. Wilson of Strong, Carlisle & Hammond; R. J. Lewis of the General Electric Supply Corp.; and Ray Bechtol of the Cleveland Ignition Co., drew up the proposed code.

It was approved by 19 wholesalers, distributors, and local manufacturers. Mr. Farrar said the code would soon be submitted to a general meeting of all factors in the industry and the advertising media whose cooperation will be sought in its enforcement.

Cleveland Retail Appliance Dealers' Association has already approved the general pre-censorship program, of which the code has now become a part.

Under the proposed program, the Better Business Bureau would examine all advertising submitted to the cooperating outlets for conformation with the code.

The rules would apply to all advertising concerned with gas or electric refrigerators, gas or electric stoves or ranges, gas or electric ironers, washing machines, electric dishwashers, electric waste disposal units, and built-in kitchen cabinets which are part of kitchen units.


PENN
FACTORY CENTRALLY LOCATED TO SPEED YOUR SHIPMENTS
PENN
REFRIGERATION CONTROLS THAT ARE RECOGNIZED LEADERS
PENN
SATISFYING PERFORMANCE THAT MEANS MORE PROFIT TO YOU
PENN ELECTRIC SWITCH CO.
OFFICES: New York, Boston, Detroit, Dayton, Moline, Chicago. EXPORT: 100 Varick St., N. Y. C. Distributors in Principal Cities. REPRESENTATIVES: Garland-Affolter Engr. Corp., San Francisco, Seattle, Portland, Los Angeles; Forslund Pump and Machinery Co., Kansas City; The Uhl Co., Minneapolis; Jules Beneke, St. Louis; Monarch Sales, Denver.
Now located in GOSHEN, INDIANA

Complete Tax Study by Federal Govt. Asked by Dept. Store Group

NEW YORK CITY — Declaring that inequities in taxation, confusion and overlapping between federal and state systems have now reached a point where only constructive and thorough-going revision of the entire tax structure will suffice, the board of directors of the National Retail Dry Goods Association has urged the federal government to undertake exhaustive survey and analysis of the tax structure in cooperation with the states.

"When and if such a survey and analysis is prepared, a commission with an equal representation of members appointed by industry, should endeavor to evolve a complete tax program for obtaining the revenue necessary for the economical maintenance of government; to the end that not only will our taxpayers be subjected to no increase in the present tax burden, but that there will be an approach to an appreciable decrease in that burden."

Advocation of such action was one of a number of steps urged on the government by the N.R.D.G.A. Among other things it hit out at the undistributed earnings tax as an emergency measure which in its present form is an "effective brake on activities which would increase employment," and is likewise a great handicap to both private and governmental efforts to increase production and distribution, because such expansion requires additional working capital. It suggested several avenues for relieving the obstacles to business expansion created by the tax.

Crosley Makes Changes in Broadcasting Studios

CINCINNATI — To provide improved transmitter facilities, studios, and executive offices, an extensive series of changes is now being executed in Crosley Radio Corp.'s two broadcasting stations, WLW and WSAI, under the direction of Powel Crosley, Jr., president.

Three new studios, several offices, and an artists' lounge are to be added to the main Crosley building on Arlington street. WLW's transmitter at Mason, Ohio, has been modernized, and broadcasting activities of both stations are to be centered in one building.

Swartzbaugh Given McGraw Award for Manufacturers

NEW YORK CITY—In recognition of his contribution to the advancement of the manufacturing branch of the electrical industry, Charles E. Swartzbaugh, president of Swartzbaugh Mfg. Co., Toledo, has been named to receive the Manufacturers Medal and Purse for 1937, given under the James H. McGraw Award.

Mr. Swartzbaugh's constructive leadership in organizing the joint development of many specific markets for electrical products while he was chairman of the business development committee of National Electrical Manufacturers Association earned him the award, in the opinion of the judges.

Presentation of the award was made Oct. 27 at the Nema meeting in Chicago.

The committee of judges which awarded the medal to Mr. Swartzbaugh consisted of: L. F. Adams, commercial engineer, General Electric Co., Schenectady; Clarence L. Collens, president, Reliance Electric & Engineering Co., Cleveland; F. C. Jones, president, Okonite Co., New York City; and S. L. Nicholson, Westinghouse Electric & Mfg. Co., New York City.

Evaporator Sales to Other Makers by Universal Cooler Increase

DETROIT — Sales of Universal Cooler evaporators on contract to other manufacturers of household electric refrigerators reached a new high in October according to F. S. McNeal, president of the company.

Orders already received for 1938 production more than double the total number manufactured in 1937, Mr. McNeal said. To meet this increased demand, the company is completing an expansion program that includes added equipment and finer inspection facilities.

Universal Cooler's 1938 evaporator is of the dry system, direct expansion type, with top mounted thermostatic expansion valve. Exterior is aluminum and interior is copper, electro tin plated. Continuous 3/8-in. copper tubing is metallically bonded above and below each tray shelf.

DISTRIBUTOR–DEALER DOINGS

Brooklyn Dealers Ask Manufacturers To Sign Price Pact

BROOKLYN—The Electrical Appliance Dealers' Association of Brooklyn, Inc., has requested all manufacturers of electric refrigerators to follow the lead of Crosley, Norge, and Stewart-Warner in merchandising their 1938 lines in metropolitan New York under price maintenance measures adopted in accordance with New York State's Feld-Crawford act.

This appeal for "fair trade" aid from manufacturers was announced by Martin A. Tarzian, chairman of the Feld-Crawford committee of the Brooklyn association, at a recent meeting of 200 association members and guests. Mr. Tarzian indicated that most manufacturers had evinced willingness to comply with this request.

Details of an elaborate advertising campaign to be conducted by New York dealers in conjunction with Consolidated Edison Co. also were presented at this meeting. Under this plan, each dealer will pay $10 a month and in return will receive cooperative newspaper advertising, a billboard near his store, a roll of distinctive wrapping paper and sticker tapé, calling cards, a list of prospects, and direct-mail pieces.

Educational portion of the program, under the direction of James J. Schneer, consisted of a talk by Mr. Tarzian on "New Merchandising Methods" and one by Russell A. Atkinson, president of the association, on "Organization."

Mr. Tarzian emphasized the part played by management and advertising in present-day business, and urged dealers to tie-in their own advertising with that of the factory, whenever possible. Mr. Atkinson reported on a recent meeting held with the Electrical and Gas Association of New York for the purpose of coordinating activities of all seasonal dealer organizations in the metropolitan area, and also stressed the importance of trade associations.

Kelvinator Distributor Makes September Best Sales Month of Year

SAN ANTONIO, Tex.—By means of a special intensive sales campaign among its dealers, Southern Equipment Co., Kelvinator distributor in this territory, succeeded in turning September, usually one of the distributorship's dullest months, into the biggest month of the year with a sales volume some $300 above that of May, the company's next best month.

Taking advantage of the usual fall slump in the refrigerator business, Southern Equipment Co. spurred its dealers into concerted action while most competitive dealers were easing up on sales efforts pending introduction of the new lines of merchandise.

Before starting the sales campaign, the distributorship completed a thorough survey of its dealer outlets. This survey showed that few of the dealers were in any position to do any extensive selling. Most dealers only had a few models on hand, and hardly any outlets were putting much emphasis on current sales.

To correct this condition, Southern Equipment Co. organized the sales campaign and sent its representatives out among the dealers to aid them in creating new displays, and in building up sales enthusiasm within their own organizations.

Philadelphia Show to Be 'Electrical Exposition'

PHILADELPHIA—Because the increasing growth and prestige of the annual electrical exhibit sponsored by the Electrical Association of Philadelphia warrant the use of a broader and more concise title, the official name of the exposition has been changed from "Electric and Radio Show" to "Electrical Exposition."

29 Kansas City Salesmen Better Quota in City Sales Campaign

KANSAS CITY, Mo.—Twenty-nine salesmen from 13 dealerships made the quotas which they had set for themselves in the cooperative August refrigerator sales campaign sponsored by the Electric and Radio Association of Kansas City.

As a reward for their efforts, these men received a special bonus of 2% of the retail value of the units sold.

A minimum quota of four units was required in the contest, the bonus applying only to the quota. Bonus payments ranged from $14.40 to $46.84, and averaged $24.86 per salesman.

New Haven Dealers Exhibit At Grocers' Show

NEW HAVEN, Conn.—The Bridgeport Fixture Co. and the New Haven Gas Light Co. participated in the Food Show conducted here Nov. 1 to 6 under the sponsorship of the New Haven County Retail Grocers' Association.

The fixture company displayed McCray refrigerator cases and coolers, while the utility company conducted a cooking demonstration during each day of the show, featuring the Electrolux refrigerator and modern gas ranges.

Edwards Becomes President Of Norge-Jacksonville Co.

JACKSONVILLE, Fla.—Walter M. Edwards, veteran local appliance merchandiser, has acquired controlling interest in Norge-Jacksonville Co. and will assume active control of the firm as president and general manager.

The company will continue as dealer for all Norge products.

Metairie Appliance Co. Moves To Larger Quarters

NEW ORLEANS—The Metairie Appliance Co., of which C. J. Albert is proprietor, has moved to larger quarters at 603 Metairie Rd. The firm handles Norge refrigerators, RCA radios, and Pentco gas heaters.

Ramsey to Manage Appliance Sales for Dept. Store

MONTGOMERY, Ala.—J. F. Ramsey, formerly sales supervisor for Alabama Power Co., has been appointed manager of the appliance department of Montgomery Fair department store here.

Shapiro Will Distribute 'Quality' Ranges

NEWBURGH, N. Y. — Shapiro Sporting Goods Co. has been appointed wholesale distributor for "Quality" gas and electric ranges in the entire Hudson Valley area, according to Hymen Shapiro, president.

Pritchard Heads Sales For G-E Supply Corp.

BRIDGEPORT, Conn.—Charles R. Pritchard, formerly appliance sales manager for General Electric Supply Corp. at Atlanta, has been appointed manager of specialty appliance sales for the same organization at its headquarters here.

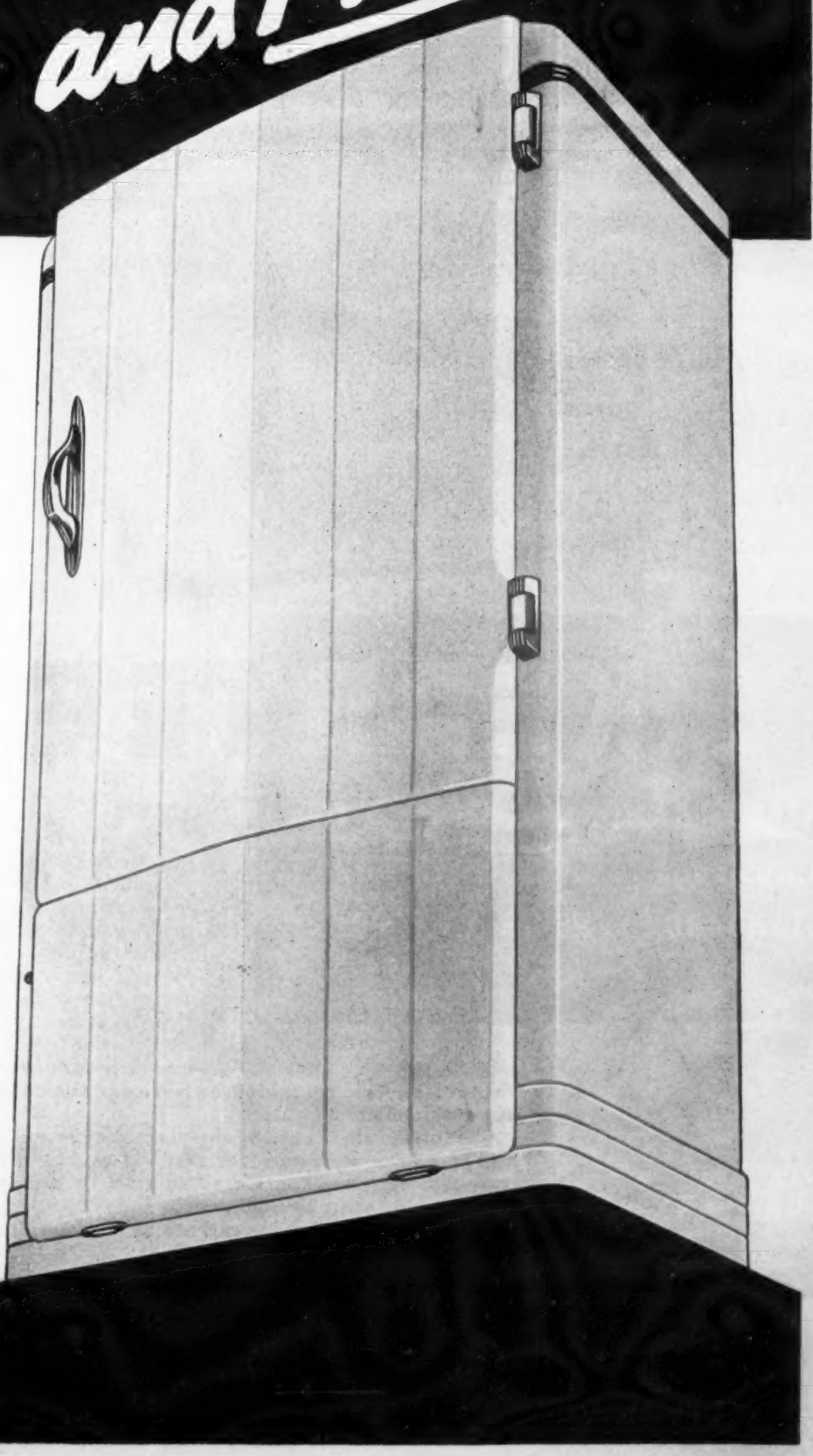
Mr. Pritchard, a native of Birmingham, Ala., was first associated with General Electric Co. in that city, beginning in 1917. From 1919 to 1932 he was with Matthews Electric Supply Co., Birmingham G-E distributor, becoming merchandise manager. He joined G-E Supply at Atlanta in 1932, and became appliance sales manager in 1934, covering Tennessee, Georgia, and Florida.

Walker & Reavis Opens New Store in Landis, N. C.

LANDIS, N. C.—Walker and Reavis, local Crosley dealership, has opened a new store here handling refrigerators, washers, and radios.

NEW 1938 STEWART-WARNER

Offers You More and Proves It!



Famous SAV-A-STEP Refrigerator Now Adds Daring Visual Proof of Economy

They're ready now! . . . the finest 1938 refrigerators of the season, and the first refrigerators in history with visible proof of every claim!

Like the famous SAV-A-STEP and Slid-A-Tray, the startling new Econ-O-Lite wins prospects instantly. Because it *proves* economy claims to the prospect's own eyes — *proves* that the Stewart-Warner runs less — costs less to run!

And it's just one of many improvements — including new Instant Cube Tray, new Cold Storage Chest and others — added to the already-famous exclusive Stewart-Warner features.

New FREE Floor Plan Lets You Buy Now Without Finance Cost

Continuing Stewart-Warner leadership in developing special, exclusive finance plans is a startling new FREE Floor Plan that enables you to stock samples of this great new 1938 line immediately — for holiday profits — without paying a penny for finance or service charges!

Special Christmas Retail Plan Makes Holiday Selling Easy

Under this special plan, Stewart-Warner dealers can advertise "Buy now — forget monthly payments until March — then take 2½ years to pay!" It will help you put many a Stewart-Warner into prospects' homes for Christmas.

More Than DOUBLED Sales and Advertising Support

Last season's Stewart-Warner advertising and merchandising aid helped dealers smash all sales records. This season, we're more than doubling this support! Coast-to-Coast radio broadcasts, on a bigger network, for more weeks! Plus powerful color ads in leading national magazines! Plus billboards! Local newspaper ads! Every selling aid you could ask! Get the details from your Stewart-Warner distributor now!

SPECIALTY SELLING IDEAS

'Family Albums' Containing Results of Use Of Westinghouse Refrigerators in 118 Kitchens to Be Used in Sales Drive

MANSFIELD, Ohio—From tests made in 117 kitchens of Westinghouse refrigerator users it was shown that monthly saving on food alone through use of advanced methods of refrigeration was $9.10, and that the average saving over previous refrigerators used in these homes was 62 cents weekly, according to a summary recently prepared by officials of the refrigeration division.

Each housewife that made the "proving kitchen" tests was required to notarize her findings, according to Westinghouse officials.

All of the results published in the summary were obtained by averaging both winter and summer performance.

Other results claimed from the tests include average running time of slightly less than two hours out of 12, depending on the geographical location, and average power consumption of .8 kwh. per day.

These results were with kitchen temperatures of 75.6° F. (average) and an average temperature of 42.5° F. in the food compartment, with average door openings being 46.4 daily.

Of the 117 kitchens tested, 102 were in the United States and the remaining 15 in other countries. The kitchens were scattered throughout the various climatic zones, so that a complete range of conditions could be obtained in order to arrive at an average.

Geographical location was not the only factor considered. Representative size families of two, three, four, five, and six persons— with food budgets ranging from $25 to $90 a month— were picked to conduct the tests.

For promotion purposes, all of the information gleaned from the "proving kitchen" activities have been collected and bound into one volume named the "family album." These "family albums" are made available to dealers and salesmen.

All of the refrigeration promotion throughout the coming year will be centered on the "proving kitchen" theme, according to Westinghouse refrigeration department sales officials.

Kitchen of Postmaster Serves as Salesman For G-E Dealer

GREAT MEADOWS, N. J.—How the kitchen of the local postmaster once served as a sales room for General Electric refrigerators is told by H. C. Honsberger, field contact man for Phillip H. Harrison & Co., G-E distributor in Newark.

The Great Meadows post office is located in the residence of Postmaster Harry Topoleski. Through the rear door of the postoffice, townspeople can see directly into the Topoleski kitchen.

When the postmaster installed a new G-E refrigerator, villagers frequently gathered around to inspect it. One day when about a dozen people were grouped around the machine, Mr. Honsberger happened to walk in. Sensing the opportunity as a "natural," he immediately started to answer the group's eager questions, then launched into a full-fledged sales talk. The result: two refrigerator orders on the spot.

2 Million Dollar Goal Set for League Campaign

DENVER—Sales goal of $2,000,000 has been set for the two months' appliance campaign of the Rocky Mountain Electrical League.

Denver Electrical League, chapter of the Rocky Mountain group, is planning an electrical exposition at the Shirley-Savoy hotel here during the first week in December.

Automobile Dealer Finds Refrigerators Make Excellent Companion Lines; Sells 104 Units in 9 Months

GOSHEN, Ind. — Selling electric refrigerators along with automobiles seems to be no job at all for I. A. Miller, local Chevrolet and Pontiac dealer who also holds a Frigidaire franchise. Mr. Miller reports sales of 104 Frigidaires during the first nine months of the year.

Mr. Miller explains that the refrigerator business brings in extra profit without any additional sales cost inasmuch as one sales and office force handles both the automobile and refrigerator business.

"Car buyers are good refrigerator prospects," he argues, "and vice versa. For both automobiles and electric refrigerators are almost indispensable items in many modern families.

"We sell only refrigerators and do not handle a full line of appliances. We believe that we could sell other appliances just as readily as we sell refrigerators, but we don't want to antagonize the local appliance dealers, many of whom are good automobile customers of ours.

"In large cities, however, we see no reason why car dealer should be deterred in this way from handling complete appliance lines."

Commissions (on both autos and refrigerators) of Mr. Miller's salesmen are based on the gross profit made on each deal rather than on the total amount of the sale. Commission percentages are raised sufficiently, however, so that the salesman makes approximately as much as if he were working on the orthodox commission basis.

For instance, 10% commission on a $200 refrigerator would net the salesman $20. If. however, the salesman is paid 25% commission on the gross profit of the deal, his dollar-and-cents commission adds up to practically the same amount.

Mr. Miller believes that this type of commission tends to reduce the number of deals based on poor trade-ins or too high allowances, and to eliminate completely any effort by the salesman to close a deal on which the company could make no profit.

Experiments with Lines and Colors Lead to Improved Posters and Placards for Los Angeles Gas Service

LOS ANGELES — Believing that the posters and placards used to advertise modern gas service could be improved upon, H. F. Lougee, an employe in the gas distribution department of the Los Angeles Gas & Electric Corp., four years ago began experimenting with line and color to emphasize brief, pointed sales messages in floor and window displays.

His efforts proved so successful that within a year his display shop had become part of the company's advertising department, and it began producing display material on Electrolux refrigerators and other gas appliances, for the utility's entire system.

Discussing the operation of his department, Mr. Lougee states:

"Our display program is arranged to tie-in with the advertising and sales program.

"Displays are built around one idea. We try to get the message across quickly, simply, and completely. It is timed to reach the prospect at one point where he can do something about it; where interest can result in an immediate sale, and where there is no opportunity to forget the name of the product before investigating."

The theory by which his staff works, Mr. Lougee stated, is that the design, or the pattern of color and light and shade should be subordinate to the message of the display.

"A good display is merely the vehicle for putting across the idea," he explained.

"All ideas and designs originate in our shop. Then, "he declared," they are submitted to Mr. Spaulding, head of the advertising department, for approval."

Grouped into three classifications, displays are prepared for A, main and district offices, B, branch offices taking a second run on major appliances, and C, display for small offices that will only take posters.

Three important phases of the department's work are planning, designing, and scheduling production, according to its supervisor.

"We revamp many displays several times before production is started on them, because the cost of the work must be kept at a minimum," he averred.

Chief material used in the displays, according to Mr. Lougee, are Upson stabilized board, Masonite, plywood, etc., with fabric or lacquer finish. Cut-out letters are fashioned from sugar pine or three-ply gumwood. Pictures are in oil or photographic blow-ups.

Mr. Lougee's staff has been concentrating recently on animated displays. A typical motion display is that which is being currently exhibited in the main showroom of the Los Angeles office. In this a rotunda with illuminated slides which depict the modern kitchen is flanked by two Electrolux refrigerators.

An enlarged replica of the Electrolux flame, in blue and yellow neon, tops the rotunda. "Modernize your home with gas" is the advertising message spelled in half-foot high cut-out letters at the back of the display.

Among the advantages of the self-owned display shop, officials of the Los Angeles Gas & Electric Corp. (which recently merged with the Southern California Gas Co.) state, is that by careful planning, the cost of the material produced is less than if the work were done by an outside concern.

Because the display men work only on the development of promotion for gas appliances, they can approach their work with a more intimate point of view, and they are always on hand to execute any demands that arise, they also point out.

F-M Team Helps Dayton Dealers Get Publicity For Their Product

DAYTON—Drum beats and band music blared the Fairbanks-Morse name in downtown streets here when the Fairbanks-Morse baseball team, city champion of Indianapolis and winner of the Manufacturers League trophy, competed for the national amateur baseball title here recently.

Before the game opened, a parade was staged through the business section, with several bands interspersed in the marching column of ball players. A large Fairbanks-Morse banner identified the company's team, the only one representing an electric refrigerator manufacturer.

The parade and the F-M team were pictured in a front page write-up of the event in the Dayton Herald.

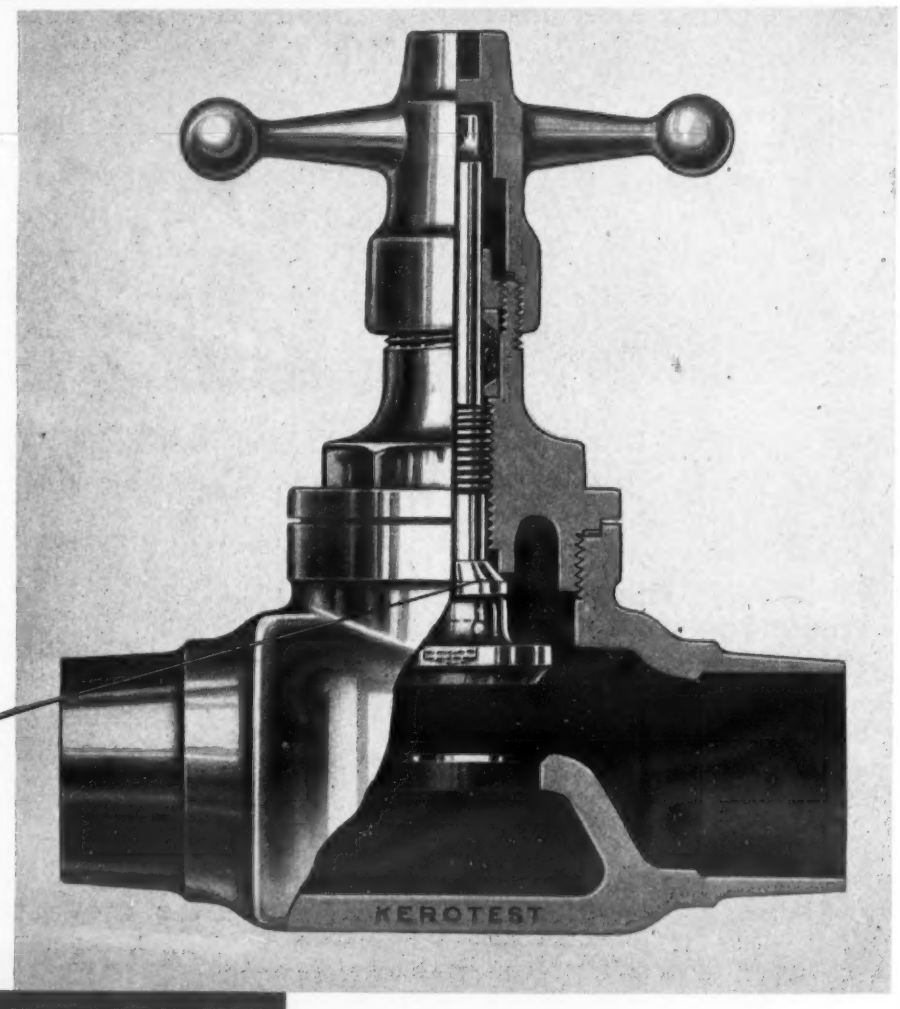
The team won two games and lost two before being eliminated.

Porcelain Institute Book Tells Salesman How to Increase His Sales

CHICAGO—"How to Increase Your Sales," a 92-page manual which offers a whole bagful of tips to appliance salesmen, has been issued by Porcelain Enamel Institute.

Primary purpose of this manual (the introduction says) is to provide the salesman with helpful sales hints; secondary purpose is to explain how porcelain enamel can help every home appliance salesman increase both the unit and dollar volume of his sales.

The following list of the book's chapter headings fairly well indicates its contents: "The Right Slant on Salesmanship," "What People Buy," "Why People Buy," "How People Buy," "How to Handle Objections," "How to Close," "Summing It Up," "After the Sale Is Over."



Kerotest Bronze Globe Valve design, with extra capacity flow more than equal to full diameter of tubing, have non-rotating, self-aligning seats assuring maximum service. Available in 1 1/8" to 3 1/8" O. D. solder connections integral on valve body.

KEROTEST

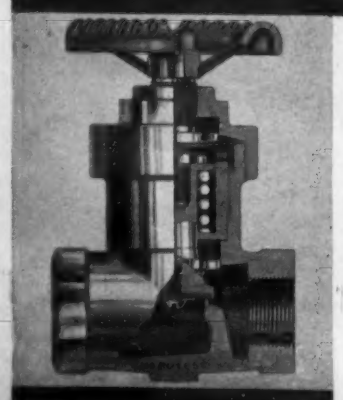
REFRIGERATION VALVES AND FITTINGS BUILT TO THE HIGHEST SERVICE STANDARD . . . NEVER TO A PRICE!

IT has been truly said that all works of quality must bear a price in proportion to the skill, time, expense and risk attending their manufacture . . . those things called dear, are, when justly estimated, the cheapest.

This applies to Kerotest Valves, Fittings and Accessories in general and to the widely specified Kerotest Bronze Globe Valves in particular. Progressive design and true craftsmanship dominate their entire manufacture. Enduring trouble-free service is meticulously *built into* every Kerotest unit step by step.

Just divide their cost by the years they last and you will discover the plus value built into Kerotest Valves, Fittings and Accessories— why Kerotests are considered an asset by leading manufacturers of refrigerating units throughout the industry.

Warehouse Stocks are carried by Kerotest Jobbers everywhere.



KEROTEST

KEROTEST MANUFACTURING COMPANY
PITTSBURGH, PA.

Tennessee Trade Act Upheld as Valid By Chancellor

NASHVILLE, Tenn. — Tennessee's new fair trade act was upheld Nov. 3 as a valid exercise of the police power of the state by Chancellor R. B. C. Howell, of Davidson county, who overruled a demurrer attacking constitutionality of the act.

Chancellor Howell's decision was rendered in the case of C. E. Rust and others against Maurice Griggs. The complainants charged that Mr. Griggs was violating the statute, enacted in February, by advertising and selling certain items below cost as leaders to draw trade.

Mr. Griggs' demurrer alleged the law is unconstitutional, unenforceable, and interferes with interstate commerce.

Proctor Made Assistant Manager of G-E Air Conditioning Dept.

BLOOMFIELD, N. J.—J. A. Proctor, assistant vice president of General Electric Co., has been appointed assistant manager of the G-E air-conditioning department, according to an announcement by J. J. Donovan, manager, and will make his headquarters here.

Mr. Proctor, a graduate of the G-E test courses and of Massachusetts Institute of Technology, was assistant chief engineer of American Marconi Co. from 1911 to 1913, and chief engineer, general manager, and vice president of Wireless Specialty Co., G-E subsidiary, between 1913 and 1929.

In 1929 he became president of the R.C.A. Victor Co., Mass., leaving in 1932 to become president of Fada Radio and Electric Co. and chairman of the board of U. S. Ventilator and Power Co. He was appointed a General Electric assistant vice president in 1935. Mr. Proctor is the inventor of the marine direction finder (radio compass).

Theis Appointed Manager Of Fairbanks-Morse Appliance Works

INDIANAPOLIS—Appointment of Edward F. Theis as works manager of the Indianapolis plant of Fairbanks, Morse & Co.'s home appliance division has been announced by W. Paul Jones, general manager of the division.

Mr. Theis has had long experience in industrial production activities, both in the automotive and appliance fields. The addition of Mr. Theis to the F-M organization, according to Mr. Jones, will enable the company to derive full advantage from the new equipment and production lines which recently were installed in anticipation of greatly increased production schedules for F-M appliances.

Donberg Manages District Sales for Apex

INDIANAPOLIS—Appointment of L. S. Donberg as district manager here for Apex Rotarex Corp., Cleveland appliance manufacturer, has been announced by C. W. Smith, Apex sales manager.

Before his promotion, Mr. Donberg was a member of the company's Cleveland sales staff. Sam Brown, also a member of the Apex sales staff in Cleveland, will handle Mr. Donberg's accounts in addition to his present territory.

Walk-In Cooler Utilized for Draft Beer Cooling

SCHENECTADY—A beer cooling refrigerating system utilizing a walk-in cooler in the basement has been installed in Hotel Tannersville in the Catskill mountains by A. Wayne Merriam, Inc., local General Electric distributor.

Piping connecting the beer kegs in the cooler with the faucets in the bar upstairs was installed, and copper water pipes were run across the ceiling of the basement cooler and up to the bar, thus keeping the temperature of the beer at about 40° F.

DRY-ZERO INSULATION MEANS *Economy* FOR YOUR CUSTOMER

Refrigerator operating expense is an important item to the average family. A sizable share of the U. S. market is made up of average families. These are two important reasons why your refrigerator should have Dry-Zero Insulation.

A refrigerator is an important item in the family budget. It not only is a large original investment for the average family; it is also an operating expense.

Therefore, anything which will make the household refrigerator cheaper to run is as important as convenient arrangement or pleasing appearance. Furthermore, this is important not only to the householder who must buy, but the dealer who must sell to that householder, and the manufacturer who must supply the dealer. All three have a stake in, and gain a benefit from, refrigerator economy.

This common sense reasoning lies behind the decision of those refrigerator manufacturers who now use Dry-Zero Insulation. They know that Dry-Zero effectively wards off the room heat which uses up refrigeration. This means less refrigeration is needed to keep food at proper temperatures. The result is a definite operating economy, ranging from 20¢ to $2.00 per month, every month of the refrigerator's life.

Of course, laboratory tests will prove that many materials have insulation ability. Why then is Dry-Zero used? The reason (proved over and over again) is quite simple: Dry-Zero Insulation retains its heat-stopping ability as long as the refrigerator runs. This means durability, vital to the long-time effectiveness of a refrigerator insulation.

Dry-Zero Insulation's heat-stopping ability and durability are inherent. They never wear out. Dry-Zero never soaks up water. Its fibres are naturally repellent to moisture. They require no artificial, temporary protection. It never rots or disintegrates. It never settles or packs down. The result is a lifetime of highly effective insulation service, a lifetime of refrigerator operating economy.

These facts are vital to manufacturer, distributor, and dealer. They mean satisfied household refrigerator owners, a new group of friends every year, a better opportunity for new sales. Those interested in Dry-Zero Insulation as an aid to greater sales are invited to write to Dry-Zero Corporation, Merchandise Mart, Chicago.

.24 INSULATION. Refrigerator insulation is rated in the heat units (British Thermal Units—B. t. u.) transmitted through the insulating material. Naturally, the smaller this rating figure, the more desirable is the insulation Dry-Zero Insulation has the remarkably economical rating of .24 B. t. u., as determined by independent authorities, such as the U. S. Bureau of Standards.

DRY·ZERO INSULATION
REG. U.S. PAT. OFF.
The Most Efficient Commercial Insulant Known

The Insulation Manufactured Specifically for Refrigerators

COMMERCIAL REFRIGERATION

Twin Fans Used in New Unit Coolers Built by Fedders

BUFFALO — Two new Twin-73 coolers equipped with two fans and a single cooling unit which has twice the capacity of that used in the single-type Model 162 and 164 Series 73 unit coolers have been announced by Fedders Mfg. Co.

These new coolers are designed for installation in large walk-in refrigerators and storage rooms as well as for comfort cooling use in stores, offices, restaurants, and similar places.

The two fans are mounted side by side horizontally, and the new units occupy little more space than single unit coolers of half their capacity. Cabinets and all parts of these units are rustproof. Hangar brackets are provided on top of the units for ceiling suspension, and the cabinets are insulated at the bottom to prevent accumulation of condensate on the outside.

The single cooling element in the new units is made of ⅝-in. O. D. seamless copper tubing. Fins are arranged vertically, providing quick drainage of condensate. Model 2162 has two parallel banks of tubing and Model 2164 has four banks. Inlet and outlet of all banks are manifolded in parallel by means of headers brazed to tubing.

General Refrigeration Opens Branch in Cincinnati

CINCINNATI—General Refrigeration Sales Co. has announced establishment here of a branch office which has taken over the refrigeration business of Refrigerating Equipment, Inc., former G-R distributor in this territory.

Lee J. Quinn, formerly connected with Refrigerating Equipment, Inc., has been appointed branch manager.

Kelvinator Survey Shows Dealer Can Save $838 With New Equipment

DETROIT—Meat dealers can save as much as $832 a year by modernizing their refrigerating equipment, states J. A. Harlan, manager of the commercial department of Kelvinator division, Nash-Kelvinator Corp., who bases his arguments on surveys among users.

Old style bare pipe coils in market refrigerators, Mr. Harlan declares, permit temperature and humidity to drop low enough to cause meat shrinkage of at least 6%.

Modern cooling units reduce shrinkage losses to 2%, says Mr. Harlan, which amounts to a saving of four pounds of meat in every 100 lbs.

With a turnover of 2,000 lbs. per week, the saving totals 80 lbs., which at 20 cents per pound amounts to $832 for a year.

Refrigerated Trailers to Be Used for Ice Cream

BEMIDJI, Minn.—Two new refrigerated semi-trailers have been purchased by the David Park Co. from the Smith Commercial Body Works, Inc., Fargo, N. D., to be used in distributing ice cream within a radius of 200 miles of this city.

The semi-trailer bodies have a load capacity of six to seven tons. The load consists of 1,100 gallons of ice cream and 100 cans of cream. The forward compartment of each body, where the ice cream is carried, is maintained at a temperature of —10° F. by four Kold-Hold units. The compartments are insulated with 6 inches of Dry-Zero blanket in the roof, 6½ inches in sides and ends, and 7 inches of cork in the floor. The compressor, which is hooked up to the Kold-Hold units, is located in the rounded front.

Sherer-Gillett Adds Island-Type Display Case for Vegetables

MARSHALL, Mich.—Sherer-Gillett Co. has announced the new Sherer island type Vegetaire refrigerated display case as a companion to the wall type Vegetaire.

Designed for stores in which the wall type cases could not be accommodoted, the new island type Vegetaire has service doors on both sides permitting full display of the stored fruits, vegetables, and fish.

There are three models now in production. Specifications are:

Model	Length	Shelf Area	Cubical Content
1307	7 feet	39.8 sq. ft.	51.8 cu. ft.
1310	10 feet	57 sq. ft.	74 cu. ft.
1312	12 feet	68.4 sq. ft.	88.8 cu. ft.

Perry-Browne Wins G-E Commercial Contest

CLEVELAND—Winners in General Electric Co.'s "Transcontinental Blimp Race," a special nine-weeks commercial sales contest, have been announced by the G-E commercial refrigeration sales section.

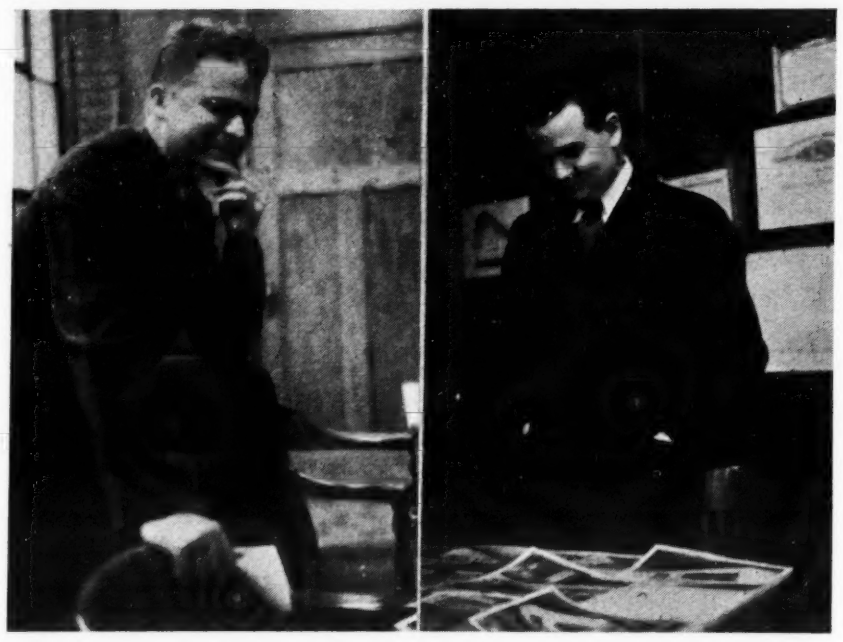
Perry-Browne, Inc., Columbia, S. C. distributorship piloted by Robert Alexander, manager of the commercial refrigeration department, won first place in the race.

Runner-up was A. Wayne Merriam, Inc., Schenectady distributor, with B. W. Stryker in command. Valley Electrical Supply Co., Fresno, Calif., with Robert Downing as pilot, took third place. Fourth place went to W. L. Thompson, Inc., Boston, with Walter Kelly at the controls.

G-E Beverage Cooler Used on Gasoline Distilling Tank

FRESNO, Calif.—To maintain a sufficiently low temperature in a gasoline distilling tank used by Twinning Laboratories here, C. T. Puckett, of the Valley Electrical Supply Co., General Electric distributor in this area, made a few alterations on a new G-E beverage cooler and applied it to the distilling tank.

They Saw Notre Dame



Carl Eliason, assistant to president, and Jerry Tyler, president of Tyler Sales Fixture Co., were hosts to Tyler refrigerator distributors at the factory in Niles, Mich., recently. Climax of the convention was a trip en masse to South Bend for the Notre Dame-Pittsburgh football game.

• • •

Tyler Introduces New Line of Store Fixtures To Distributors at Sales Convention

NILES, Mich. — Tyler Fixture Corp.'s 1938 line of commercial refrigerators, display cases, and food store fixtures was introduced at the company's factory here Nov. 6 to a convention of distributors and dealers who came from all over the country.

Outstanding new feature of the 1938 Tyler display case is a non-glare lighting system designed by the company's development engineers. Other new features are adjustable mezzanine shelves, improved lower baffles and drains in double-duty cases, locked-in hard rubber sliding doors, stainless steel and black rear finish, and "streamlined" porcelain cabinet.

A new sectional steel-clad cooler and two new sizes of reach-in refrigerators have been added to Tyler's list of products for 1938. The sectional cooler is being introduced after two years of research and experimentation by Tyler's engineers.

The two new reach-ins are a larger conventional box, also adaptable for bakery use, and a self-contained unit. Porcelain exteriors are available on all of the 1938 reach-in refrigerators if requested.

Also introduced at the convention were Tyler's 1938 models of fruit and vegetable display equipment, fish display cases, dairy and delicatessen display cases, walk-in coolers, counters and tables, and steel shelving.

After the showing of the new products, an inspection tour of Tyler's two plants was conducted for the distributors and dealers. A luncheon was served at the Elk's club, and then the whole party attended the Notre Dame-Pittsburgh football game at South Bend, Ind.

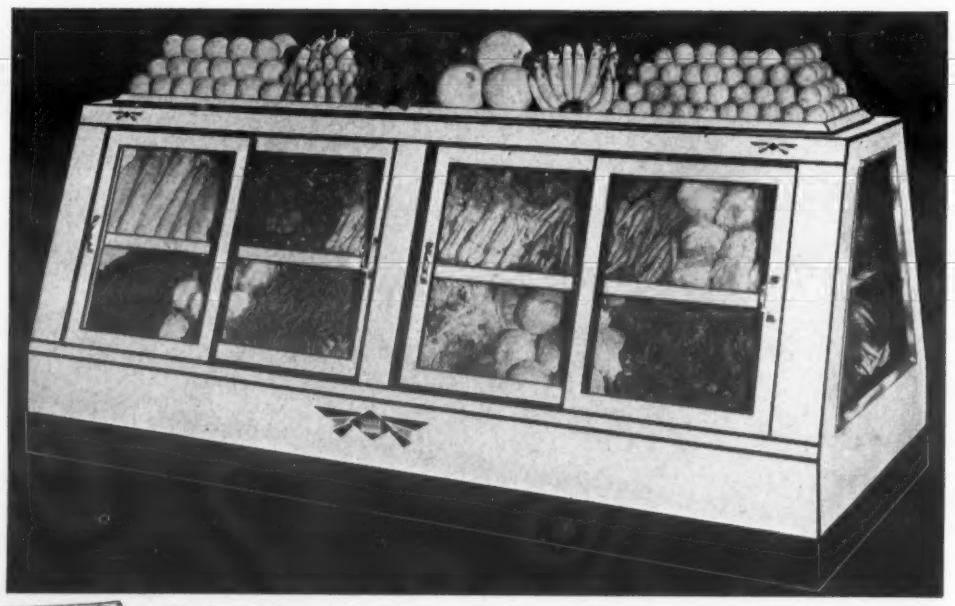
Trenton Issues Catalog on Complete Line of Coils, Condensers, Ice Makers

TRENTON, N. J.—Trenton Auto Radiator Works, manufacturer of Kramer refrigeration equipment, has issued a catalog giving illustrations and complete specifications of the coils, condensers, ice cube makers, unit coolers, and water coolers which it produces under the Kramer name.

Numerous analytical diagrams and several pages of refrigeration engineering data are included in the catalog.

MORE EVIDENCE OF *Sherer* PROGRESS

THE NEW *Sherer* ISLAND TYPE "VEGETAIRE" OPENS UP NEW MARKET FOR REFRIGERATION SALES



Sherer Wall Type "VEGETAIRE" Big Seller for Refrigeration Distributors.

Refrigeration distributors praise the "Vegetaire" as a big seller during 1937, and expect even greater sales in 1938.

Here's another new Sherer sales-maker bringing more refrigeration business right along with it.

The island type VEGETAIRE meets the requirements of combination food and grocery stores for a refrigerated center store produce display case. Built to a low overall height (50"). Deep shelves for maximum shelf area. Complete visibility of all items on display.

Additional sales bring retailers extra profits, and elimination of spoilage and shrinkage losses (important factors at this time of the year)—brings 8 to 10% savings!

Most important of all are the ADDITIONAL COMPRESSOR SALES! Every VEGETAIRE sale means a COMPRESSOR sale. You offer a **complete** service to your customer **and make double profit!**

Sherer places itself on record as aiming to produce a steady flow of new items that will make increased sales opportunities for you. It pays you to sell SHERER equipment!

Mail coupon today for details of the Sherer Franchise.

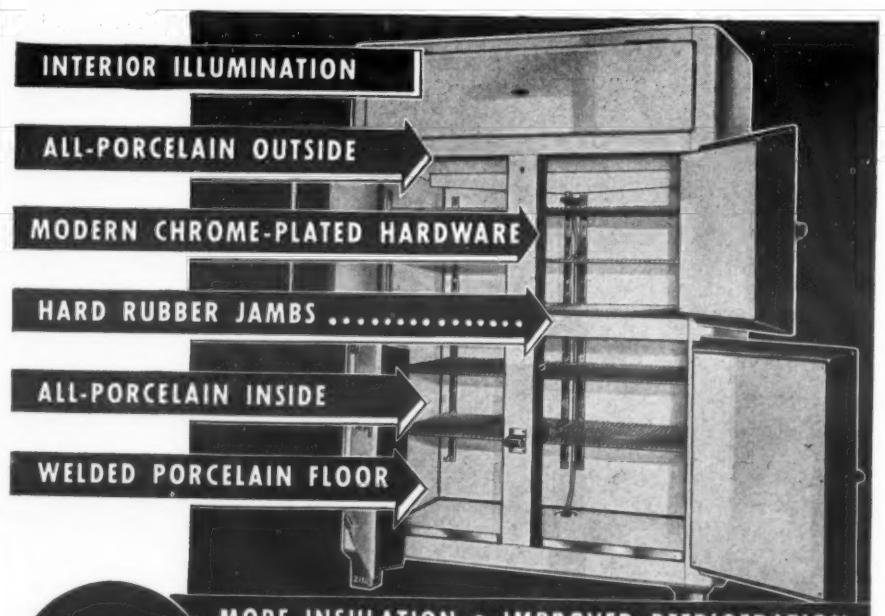
SHERER
DISPLAY AND STORAGE EQUIPMENT FOR RETAIL FOOD STORES
SHERER-GILLETT CO.
MARSHALL, MICHIGAN

SHERER-GILLETT COMPANY
MARSHALL, MICHIGAN
EXCLUSIVE CASE AND COOLER MANUFACTURERS SERVING FOOD RETAILERS SINCE 1852

☐ Send complete information about both types of Sherer "Vegetaires."
☐ Send us full details about the SHERER Case and Cooler Franchise, including catalog illustrating the SHERER Line.

Name.....
Address.....
Territory Interested In.....

MAIL THIS COUPON FOR CATALOG AND COMPLETE INFORMATION



Hill *for those* WHO WANT THE BEST

Hard commercial use in hot kitchens makes the *best* Reach-in Refrigerator the most economical—the least costly to operate, the longest lived, and the most convenient. That is why **Hill** Reach-in Refrigerators are *easier* to sell to hotels, restaurants, hospitals, institutions and bakeries.

● Send for 32-page illustrated catalog, using your business letterhead. 168

HILL PRODUCTS DIVISION
C. V. HILL & CO., INC., TRENTON, N. J.

Frick Reports Eight Fruit Storage Jobs

WAYNESBORO, Pa.—Eight recent installations of cold storage systems in eastern and southern states, using Frick refrigerating equipment, have been reported to company headquarters here by distributors from those sections of the country.

One of the largest private cold storage plants ever built is that constructed for Senator Harry F. Byrd of Virginia at his home near Berryville, Va., under the supervision of Van R. H. Greene, New York City consulting engineer.

USED FOR APPLE STORAGE

The building, situated in the center of Senator Byrd's huge apple orchard, is two stories high, has a basement storage room 190 ft. long, 140 ft. wide, and 10 ft. high, has a machine room separate from the storage room, and is used solely for packing and storing apples.

Refrigerating equipment includes a 7 x 7 Frick ammonia compressor with a 40-hp. motor, a 6 x 6 compressor with a 25-hp. motor, a 40-ton evaporative condenser, a 16-ft. receiver, and 13,680 lineal feet of 2-in. pipe arranged in 4-pipe coils suspended from the ceiling of the storage room along the support columns.

80,000 BUSHEL CAPACITY

The apple storage house at Funk's Orchards in Boyerton, Pa., has a storage capacity of 80,000 bushels, and is cooled during the harvesting season by two 5 x 5 Frick compressors with blower units pulling fresh air through a duct. One of the compressors is shut off during the winter. Carbon dioxide eliminators are installed near the floor in the storage rooms.

Two blower units automatically operated by a 5 x 5 compressor and a 15-hp. two-speed motor cool the storage rooms in the Brunswick orchards storage building at Orwigsburg, Pa. The rooms also are equipped with fresh air ducts and carbon dioxide eliminators.

The Funk and Brunswick installations were made by Allen Refrigerating Co. of Allentown, Pa., which company also installed the four 6 x 6 Frick compressors in the cold storage plant of Trexler Orchard near Allentown.

BUFFALO UNIT COOLERS

Chazy Orchards, Chazy, N. Y., said to be the largest growers of McIntosh apples in the world, are having six Buffalo unit coolers with automatic control installed in their two-story storage building. In the quick-freezing room on the first floor will be a special 5 x 5 Frick ammonia refrigerating unit. The main cooling load will be carried by two enclosed type compressors, one an 8 x 8, the other a 6 x 6.

Frick's Albany, N. Y. branch has sold two 6 x 6 compressors, two MS condensers, and four Buffalo unit coolers to S. Allen's Sons, Hampton, N. Y., for installation in that company's fruit storage building.

A Frick 6 x 6 compressor with automatic control is used to operate the cooling system in Edward J. Swisher, Jr.'s fruit storage building at Levels, W. Va. The system uses a 1,300-lb. charge of ammonia for its 4,800 feet of 2-in. coils which are installed along the ceiling of the upper story. Cooling water for the tower is collected by rain troughs. Fans are to be installed to increase air circulation.

PRECOOLING PLANT

Port Everglades Refrigerating Co., near Fort Lauderdale, Fla., uses three 9 x 9 machines in its precooling plant which stores fruits and vegetables. The plant comprises six large precooling rooms, averaging 93 x 22 x 9 ft., through which air is circulated from ducts connected to a plenum chamber above the ceiling. Air is cooled to as low as 28° F. by passing over special vertical coils mounted above a brine tank.

The brine is further cooled by a second set of coils in the tank, and is pumped through atomizers over the coils in the airstream. Two large fans, each of 64,000 c.f.m. capacity, keep the air in movement.

V-belt drives to 75-hp. Westinghouse motors are used to operate the compressors. Three vertical shell-and-tube condensers are used in the system.

Cooper Makes Special Commercial Installations In Industrial Plant, Laboratory and Bindery of Printing Firm

CHICAGO—Three unique applications of commercial refrigerating equipment have been made recently by the commercial department of R. Cooper Jr., Inc., local General Electric distributor.

A special storage cabinet equipped with a conditioned air evaporator and a ⅓ hp. compressor was designed by E. E. Cragg, commercial engineer, for use in the switchboard finishing department of Western Electric Co. The latter company was experiencing difficulty in manufacturing the switchboards because the rubber rolls of the machines were deteriorating at temperature above 70° F.

Presence of varnish fumes necessitated explosion-proof equipment in the refrigerating system. Mr. Cragg's cabinet solved Western Electric's difficulties, and similar cabinets can be used for storing rubber rolls in printing plants and industrial concerns.

Built for the express purpose of fixation of tissue in the medical laboratory at the University of Chicago, a special cabinet was designed by John E. Field. Similar to an ice cream cabinet, the unit has six inches of insulation. A container is fitted into the center, and the refrigeration tube coil is led into it. Glass test tubes are immersed in a 40° F. alcohol solution within the tank.

Reggensteiner Corp., publishing firm, encountered trouble in the summer months when the glue used in binding books would not set properly, and applied to the Cooper company for a special refrigerating arrangement. Cooper engineers evolved an installation in which a refrigerating coil made of square cross section tubes was soldered to the brass plate which serves as a guide for the metal-link book conveyor belt.

A conditioned air evaporator precools air which is then blown between the links of the conveyor, resulting in refrigeration and dehumidification. The entire conveyor is enclosed in an insulated tunnel to minimize refrigeration loss.

Modern Applications Are Studied at First ASRE Meeting in Chicago

CHICAGO—"Modern Applications of the Refrigeration Cycle and Practical Methods of Heat Balance" was the central theme of the first fall meeting of the Chicago section of American Society of Refrigerating Engineers held at the Chicago Engineers' Club. The meeting was attended by 140 persons.

Fred Ophuls, New York consulting engineer and past president of A.S.R.E., described "A Novel Refrigerating and Power Plant," and C. I. Elliott, Carrier engineer, spoke on "Heat Conservation as Applied to Industrial Plants."

Third speaker of the evening was Dr. A. A. Berestneff, Carrier research engineer, who discussed "Modernizing the Ammonia Refrigerating Cycle." S. O. Maxwell, engineer with Terry Turbine Co., Hartford, Conn., concluded the speeches with a talk on "Selection and Design of Turbines."

Elected officers for the 1937-38 season were:

Chairman — Deane E. Perham, director of refrigeration, Chicago Master Steam Fitters Association; first vice chairman—S. C. Bloom, consulting engineer; second vice chairman—J. E. Peterman, chief engineer, North Shore Ice Co., Hubbard Woods, Ill.; secretary-treasurer—B. E. Seamon, president, Westland Engineering Co.; assistant secretary—Andy J. Sander, engineer, Chicago Master Steam Fitters Association.

Fogel Gets Award for Case At Philadelphia Food Show

PHILADELPHIA — One of the models in Fogel Refrigerator Co.'s 1938 line of commercial case equipment was awarded the Gold Star Award and Silver Cup for quality and beauty at the Philadelphia Food Show and Equipment Exhibition in the Commercial Museum building here recently.

Presentation of the award was made by Charles Abramow, an official of the Frankford Grocery Co., Philadelphia, in the presence of Jack Bass, of the equipment department of Quaker City Grocery Co., and the following officials: Albert Fogel, sales manager; Harry Fogel, secretary and treasurer, and W. R. Matier, assistant sales manager.

Russ Designs Ice Cream Cabinet to Aid Dealer

CLEVELAND—A new style of ice cream cabinet, known as the "Russ Merchandiser," has been introduced by Russ Soda Fountain Co. It is designed to help ice cream retailers level off their off-season slump by building up their carry-out trade.

Feature of the new Russ unit is its illuminated menu board, which not only lists available flavors of ice cream on changeable celluloid strips but also holds posters urging customers to "take a package home."

Another advantage claimed for the new cabinet is its patented "Trayveyor" system of sliding compartments, which is said to divide the internal area of the unit horizontally in such a way that the serving surface is almost doubled.

Other features claimed for the new unit include square-cornered compartments designed to increase the cabinet's capacity, all-dry construction, steel housing, full-opening covers, and thick insulation.

The unit is available for self-contained or remote installation.

BRUNNER ENGINEERING HAS ADDED SAFETY IN THREE IMPORTANT WAYS

MODEL A-50
½ H. P. AIR COOLED
Condensing Unit

Maybe you never thought of the safety angle in connection with refrigerating and air conditioning equipment. But Brunner engineering saw to it long ago that structural precautions were taken to eliminate all possible hazards . . . Each receiver is fitted with a carefully designed fusible plug to insure safety in operation . . . Two line valves, holding all gas in the receiver when desired, insure safety in shipment . . . Neat guards for belt, fly wheel and fan, insure against physical injury. These safety essentials, found on every Brunner unit, have contributed in an important way toward Brunner's time-tested reputation for dependability . . . Better get acquainted today with a full roster of Brunner features! Forty-seven condensing units and five compressor models for nearly all refrigerating and air conditioning installations. Brunner Manufacturing Company, Utica, N. Y., U. S. A.

BRUNNER
BUILDS FOR *Greater* DEPENDABILITY

Norge Prepares Test Outfits for Dealers' Use in Dramatizing 3 Prime Features Of 1938 Household Refrigerator Line

(*Continued from Page 1, Column 5*)

ed the necessity of keeping price differentials adjusted to meet this class of competition.

The inventory situation regarding refrigerators is in much better shape than it was a year ago, Mr. Blood said. Year-end stocks, he continued, will not be large. Distributors need not strain their capital unduly by carrying large and expensive stocks; rather, the distributor's function is to serve as a sales force for the manufacturer, utilizing the funds available from large finance firms as assistance in carrying merchandise, he concluded.

"Don't lose sight of the main objective," Mr. Knapp urged in his address. Electric refrigeration is still Norge's principal product, he emphasized in pointing out that, of total sales of Norge products for the first 10 months of 1937, electric refrigeration represents only about 52%. This comparative de-emphasis on refrigeration amounts to losing sight of the main goal, he contended.

During his 10 years with Norge, Mr. Knapp said, the company has sold more than two million appliances.

P. B. Zimmerman, new Norge vice president in charge of sales, who presided at the convention, said in his opening address that the potential market for refrigerators and other major home appliances is greater today than it was a number of years ago, when the business first was developed.

More wired homes in America today are without the conveniences of refrigeration, electric cookery, and modern laundry equipment, Mr. Zimmerman said, than a decade ago, when the major appliance business first reached major proportions.

An interesting tableau preceded the formal presentation of the 1938 Norge refrigerator line. In succession, a strong man, a Scotchman, a small Negro boy with a very large slice of watermelon, and a policeman took their places on the stage. When the refrigerator was unveiled, beside it stood a comely young woman.

These characters, it was explained, emphasize the major points of the Norge refrigeration story for 1938: power, economy, capacity, protection, and beauty.

Detailed description of the new Norge refrigerator line was given by Paul Puffer and Jack Tenney, factory field men.

STRESS FOUR FEATURES

Four standard features will be stressed in sales and advertising plans for the coming year, distributors were told. There will be: 1. The super-powered Rollator compressor unit; 2. Odorless ice compartment; 3. Flexibility of interior arrangement, permitting the housewife to suit herself as to food storage; 4. Norge's 10-year warranty on the Rollator, longest protection plan in the industry.

To dramatize the first three of these features, the company has prepared: 1. A test outfit in which three 5-cu. ft. cabinets are kept at safe food preservation temperature by the use of but one Rollator unit; 2. A test using a sensitized paper, half of which is put in the regular cabinet interior and the other half in the ice compartment, and ammonia fumes loosed in the box, to show that no odors enter the ice cube compartment; 3. A cabinet display in which a watermelon is used as an example of how bulky foods may be stored without taking up an excessive amount of space.

Three refinements in operation which Norge's engineering department has made in the 1938 refrigerators were outlined in a brief skit in which the characters were Mr. Zimmerman, Ira Reindel, chief engineer, and H. L. Spencer. The refinements have to do with insuring more quiet operation in the 1938 boxes.

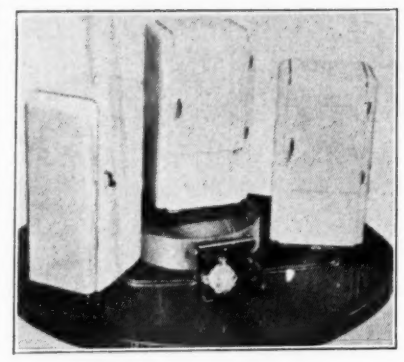
FIELD SERVICE

In a brief discussion of field service, Jack Cameron, service manager, pointed out that, in general, service facilities in most metropolitan areas are good. There is a definite need for better trained men in the smaller towns and outlying territories, however, he said. In this connection, he announced that a factory service school would be held during January in Muskegon.

R. E. Densmore closed the morning session with a short talk on "Norge Selling in 1938."

Opening the afternoon meeting, Mr. Zimmerman gave a brief summary of Norge's plans for home laundry equipment in 1938, saying that the market for this type of merchandise next year was second only to that for refrigerators.

Three in One



This display of three 5-cu. ft. refrigerators kept at food preservation temperature by a single Rollator compressor will be used to prove Norge's super-power.

LAUNDRY EQUIPMENT

E. R. Bridge, laundry equipment sales manager, took over to display the 1938 washer and ironer lines and outline their outstanding sales features.

Norge's laundry equipment sales volume during the first 10 months of 1937 has increased at a rate three times faster than unit sales for the industry as a whole, Mr. Bridge declared. He emphasized the need for increasing the number of washer-ironer dealers, pointing out that a good number of these may be recruited from Norge refrigerator dealerships which are now selling other laundry equipment lines.

Most competitive companies in the laundry field, he stated, have about three times the number of dealers that Norge now has; bringing the dealer representation up to the level of others, he added, should result in a proportionately greater increase in Norge laundry equipment sales next year.

IMPROVEMENTS IN LINE

Major improvements in the washer line, as outlined by Mr. Bridge, include the addition of a "Norcelain" on the aluminum agitator; three-position control on the wringer; extension casters for evening up the washer on uneven floors; and a more convenient location of the motor cut-off switch. The regular Autobuilt transmission has been retained.

Ironer improvements include a new type of clutch mechanism, and easier control made possible by more convenient location of hand and knee levers.

Washer competition will be considerably more severe in 1938 than it was this year, Mr. Bridge declared; several new companies will be in the field, and the resulting tightening of competition should do much to stimulate interest in electric washers, he added.

To assist distributors in becoming more efficient in their ironer demonstrations, the company in January will add an ironer instructor to its field force, it was announced at the convention. This instructor, who will be available to all distributors, will teach the distributor's demonstrator how to show off the ironers in the most effective, impressive manner.

ELECTRIC RANGE PLANS

In outlining the Norge 1938 range program, Mr. Zimmerman pointed to the electric range as the home appliance which, by popular concensus, will be the next to attain volume comparable to that of the electric refrigerator. Norge is in a fortunate position in the range field, he said, in being able to supply its sales forces with either electric, natural or manufactured gas, or bottled gas ranges.

M. G. O'Harra, range sales manager, discussing the range market, called attention to the fact that the electric range is now a dealer merchandising product, with utility companies having finished their pioneering work and being ready to step out of the selling picture. From 65 to 75% of 1938 electric range sales, he said, will be made by dealers.

The electric range has just entered the volume selling field, and great things may be expected from the aggressive merchandising of this product in the next few years, he declared. For several years to come, he predicted, range sales will continue to show a steady rise. He urged distributors to get their range prospects from among present users of Norge refrigerators.

Detail descriptions of the 1938 range lines, gas and electric, were given by A. Kitson and W. Hostetler. The electric ranges will have Chromalox cooking units, a drawer-type broiler, well-cooker, and a new type of oven temperature and time control. Hardware will be the purchaser's choice of black, red, green, or delphinium blue.

GAS RANGE MARKET

Referring to manufactured or natural gas and bottled gas ranges, Mr. O'Harra said that Norge will end 1937 in the top position in the gas range field. Moving of plant operations to Muskegon, he said, has been a factor in slowing up production somewhat, otherwise the company would be even farther in the lead than it now is.

Sale of bottled gas ranges, Mr. O'Harra predicted, in the next few years will run second only to those of electric ranges. There is a great market for this product, he said, in rural areas, where housewives desire a better method of cooking, but lack the facilities for electric ranges.

Highlights of Norge's manufacturing policies for the coming year were outlined in a brief speech by C. D. Donaven, vice president in charge of manufacturing. Mr. Zimmerman then closed the meeting with a summary of the first day's presentations. Shipments of refrigerators for sample purposes, he said, would be available to distributors by Nov. 20, with complete selection ready for delivery soon afterward.

Monday night was "Borg-Warner Night" at the convention, with George Borg, chairman of the Borg-Warner board of directors, and other Borg-Warner directors and officials of subsidiary companies as guests of honor. President Howard E. Blood of Norge was master of ceremonies, and Robert E. Ripley of "Believe It or Not" fame was principal speaker. Tuesday night was to be "Norge Night."

COMMERCIAL EQUIPMENT

Norge's lines of packaged heating and commercial refrigeration equipment occupied the center of attention at the opening of the second day's sessions. Introducing the heating equipment line, George McIntyre announced that district meetings would be held in February in Atlanta, Dallas, Pittsburgh, San Francisco, and New York City.

No new equipment was shown, but it was said that information on new products would be made available to distributors shortly after the first of next year. Changes in heating equipment, Mr. McIntyre said, will not be many; the company is principally concerned with increasing and improving production of the existing line.

The "packaged" idea will be adhered to in all new merchandise, he stated. A series of service schools is planned for next year.

Stressing the importance of commercial refrigeration as a vital link in preserving food between the time it leaves the farm or plant and the time it reaches the home, Walter E. Landmesser, new Norge commercial refrigeration sales manager, urged distributors to capitalize on their opportunities in this field.

Gauging the importance of the "packaged" commercial field in 1938, Mr. Landmesser said that between 12 and 14 million dollars worth of beverage coolers will be sold during the next year, and that water cooler sales during the same period would approximate 15 million dollars. Room coolers, he added, are becoming an increasingly important source of revenue in the air-conditioning field.

EMPHASIS ON SERVICE

Best sales emphasis, Mr. Landmesser declared, should be placed on the proper servicing of commercfal equipment. He urged that distributors start with the smaller commercial equipment, working up gradually to the larger jobs requiring a more specialized engineering service.

As far as air-conditioning equipment is concerned, he said, the company has not yet fully decided how far it wishes to go into that field.

Speaking on the broad opportunities in the commercial field, H. H. Whittingham, Norge vice president, urged that distributors give the factory the benefit of suggestion and criticism as to how improvements might be made.

Norge's line of products may be effectively combined in the All-Norge

(*Concluded on Page 11, Column 1*)

GENERAL ELECTRIC SELECTS *Bonderizing*

TO PROTECT WASHING MACHINES FROM *Rust*

Added to the many outstanding features of the modern General Electric washing machine is a new quality—protection from rust.

Now General Electric, following their well known policy of constant research for improvements, includes Bonderizing in their finishing system to give many important washing machine parts resistance to the attacks of corrosion. Bonderizing under the enamel on wringers, tub skirts and legs, sets up a barrier to the effects of moisture and gives the finish greater durability.

Any iron or steel product that will be exposed to corrosive conditions can be given similar protection. Bonderizing is the best known process for providing effective adhesion for final finishes and protecting the metal from rust.

Bonderizing adds a distinct sales feature. It is a hidden quality that impresses prospective users. It can be applied economically and installed without undue disturbance to present finishing facilities.

PARKER RUST-PROOF COMPANY
2197 East Milwaukee Avenue • Detroit, Mich.

Ask for these Books:

For more than 22 years, this company has devoted its entire time, talent and energy to the improvement of rust-proofing methods. New books describing the Parker Processes are available to manufacturers and technical men. Send for your copies.

PARKER *Processes* CONQUER RUST
BONDERIZING • PARKERIZING

New Time Payment Terms and Plans For Salesmen's Training Outlined At Norge Distributor Convention

(*Concluded from Page 10, Column 5*)
home, he pointed out, at the same time saying that, at present, this is still more of an idea than a fact. He urged distributors to seriously consider the possibilities of such a movement as a real aid to sales of all appliances.

EXPLAIN CREDIT TERMS

John Park, Norge treasurer, next introduced W. H. Crawford, vice president of Commercial Credit Co., who explained that present tighter credit terms are the result of banking companies' belief that business conditions are definitely on the upgrade.

The invariable 10% down payment ruling, Mr. Crawford declared, had created some sales resistance when put into effect in September, so that his company has arranged to finance refrigerator sales at a down payment of 5%, provided the terms are limited to a maximum of 24 months.

Down payment must be at least $5, however, and monthly payments must equal that amount, he added. On all contracts extending longer than 24 months, the 10% down payment requirement holds.

Volume of business done by Norge distributors and dealers through Commercial Credit totaled $26,000,000 in 1936, he said, an increase of 72.8% over the $15,000,000 transacted during 1933. Volume of wholesale business totaled about $5,000,000 compared with $20,000,000 in retail business, he added.

184,000 PURCHASER ACCOUNTS

This represents approximately 184,000 purchaser accounts, he said, and more than 2,000,000 collections.

Commercial Credit will cooperate in price control, he said, if distributors will furnish territorial offices with a list of suggested retail prices, by refusing to accept contracts sold at lower than established prices.

Distributors can also help keep time payment terms shorter by giving a premium to dealers who sell on shorter terms, he said. He emphasized that 42% of repossessions are made in the first month after the sale, and that a total of 78% of repossessions are made during the first three months.

SALESMEN'S TRAINING

W. B. Burress, in charge of Norge's salesman training program, opened the Tuesday afternoon session with a talk stressing the importance of the retail salesman, pointing out that, in the final analysis, the income of the entire industry depends upon the effort of this individual.

To dealer complaints about "lousy" salesmen, Mr. Burress has a stock three-question reply: Who hired them? Who trained them? Then who's "lousy?" Most dealers, he said, answer the first two questions with "I did," but have no comeback for the final query.

"What we are attempting to do in this salesman training program is to build up the salesmen's confidence, to sell them on the idea of salesmanship, and to create in their minds a desire to succeed.

"This factor of proper mental attitude," Mr. Burress stated, "is an important consideration throughout the entire sales organization."

Norge's new educational service for distributors was described by E. L. Lovegren, its director. This service will consist of special bulletins, articles in the Norge house organ, and personal contact.

THEME OF ADVERTISING

Simplified advertising, based upon three fundamental themes and aimed directly at the masses—this was the theme of the address given by A. W. Seiler of Cramer-Krasselt Co., Norge advertising agency.

The three advertising themes center around the three visual demonstrations through which Norge will attempt to merchandise its refrigerators next year; the three-on-one display, the watermelon test, and the taste test. Advertising also will capitalize on the prestige of the Rollator unit and its 10-year warranty.

The heavy advertising schedule, which includes national magazines, newspapers, trade papers, billboards, window displays, etc. will break March 16 in a double-page, four-color spread in the Saturday Evening Post.

First month of advertising will stress the three-on-one test, during the second month the watermelon or usability test will be emphasized, and the third month's advertising will feature the visual taste test. Every advertisement will carry the complete Norge story, with emphasis on the one special point.

OBJECTIVES FOR 1938

Details of the advertising and promotion program for 1938 were given by J. A. Sterling, advertising and sales promotion manager.

"It is up to you members of our distributing organization to get behind this advertising campaign and make it produce," he declared.

Norge advertising for 1938 will be spread through the following national periodicals with a combined circulation of 14,200,000: Saturday Evening Post, Collier's, Good Housekeeping, Women's Home Companion, Better Homes and Gardens, American Home, Parent's Magazine, Christian Science Monitor.

Through the medium of American Weekly, This Week, and 32 other Sunday newspapers or supplements, the Norge message will reach a circulation of 19,000,000.

Provision has been made for 4,000 billboards in 125 cities, but the extent to which this advertising medium will be utilized will depend upon the initiative and acceptance of the distributor organization, Mr. Sterling explained.

"So comprehensive is Norge's promotional program for 1938," he declared, "that a dealer may obtain anything from a wall poster to a complete new store. Plans for new stores will be furnished through an arrangement with Pittsburgh Plate Glass Co.

"Promotional literature, however, will be minimized. Only two pieces of literature will be issued on each product. The distributor's plan book is condensed into a single volume, while two pieces of sales literature have been prepared for dealers and two for salesmen."

Going to Honolulu?

Make Your Hotel Reservation Early, Says Peter Fukunaga

Honolulu is crowded with tourists and reservations for the rooms at the better hotels must be made a month in advance, according to Peter H. Fukunaga, president and manager of the Service Motor Co. and the Easy Appliance Co., who is attending the Norge distributors convention in Detroit this week.

Mr. Fukunaga was among the numerous representatives from distant lands who were introduced by President Howard Blood at the Norge banquet Monday night. As each "foreigner" rose to take a bow Mr. Blood waved a small flag of the country represented.

When the smiling Japanese responded Mr. Blood hesitated and sorted over his collection of flags. Then it dawned on him that Mr. Fukunaga is selling Norges under the stars and stripes but no U. S. flag had been provided for this bit of dramatic toastmastering.

Mr. Fukunaga has 16 dealers in the Hawaiian Islands. He also sells Chevrolets and GMC trucks. This is his third year as Norge distributor.

Calif. Conditioning Code Approved

(*Concluded from Page 1, Column 2*)
human comfort, as developed by the committee, are grouped into 18 sections, including a section outlining minimum standards for cooling apparatus, a section covering minimum design temperatures, and humidities for comfort cooling and comfort heating.

The standards, based on data outlined in A.S.R.E. and A.S.H.V.E. guides, the code of application engineering standards of A.C.M.A., the code for Warm Air Heating, and the Chicago Standards for Comfort Air Conditioning, have been adapted to meet conditions existing in California.

Pals and Leaders

Great pals as well as leaders in cooperative association work in the refrigeration parts and supplies industry are Frank J. Gleason (left) formerly executive secretary of both the Refrigeration Supplies and Parts Manufacturers Association and the National Refrigeration Supply Jobbers Association; and J. D. Colyer of Wolverine Tube Co., president of the Parts Manufacturers Association.

The picture was one of the many hundreds taken in a "slot machine photography" booth which formed a part of the exhibit sponsored by the R. & H. Chemicals Dept. of E. I. du Pont de Nemours & Co., Inc., at the refrigeration parts and supplies show held during the first week of November in Chicago.

San Antonio Group Adopts Code

(*Concluded from Page 1, Column 3*)
the selling or distribution of household appliances of poor or inferior quality or workmanship.

3. To aid in creating in the minds of the public at large a feeling of confidence in the quality and value of household appliances offered by members of this organization and dealers in general.

4. To encourage concerted action through lectures, papers, and discussions for the purpose of enlightening those allied with the household appliance industry, for the betterment of business methods and advancement of all articles connected with the industry.

5. To be in readiness at all times, collectively or individually, to cooperate in every effort of civic improvement and public welfare.

6. To radiate a feeling of brotherly love, not only among those in our particular line of endeavor, but also among others with whom we come in contact.

7. The promotion of good fellowship as an organization, and as individual members of the organization.

Officers of the association are: Charles Lorenz, acting president; Leon Walthall, secretary-treasurer. George Fake has been president, but is automatically barred from office since he has recently joined a wholesaler's organization. Directors of the association are: Albert Rose, Frank Atwater, A. F. Beyer, and E. R. Moon.

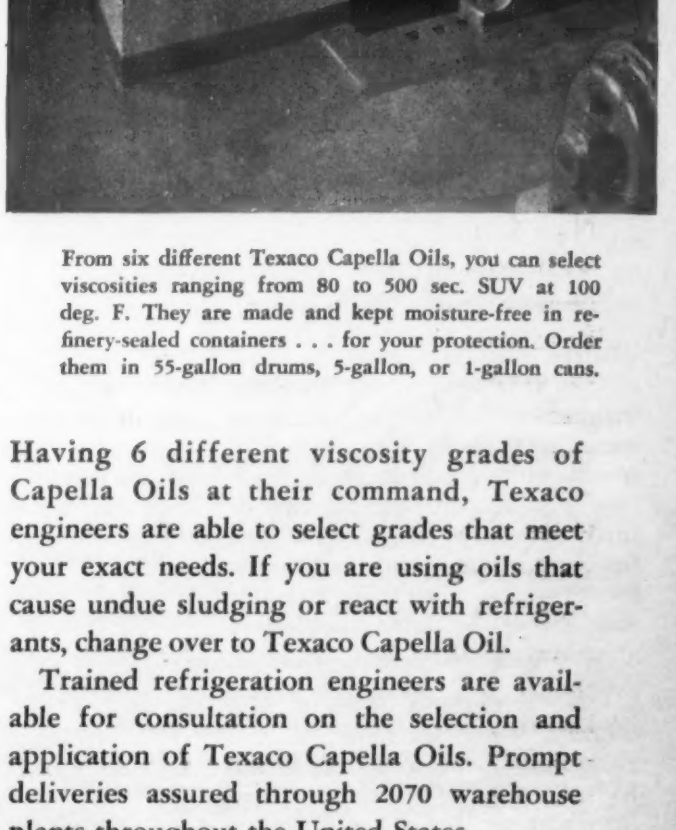
Refrigeration

Keeps millions of barrels of apples fresh for you, each year. In the storages around Winchester, Va., the apple center of the East, 85% of the refrigerating equipment is Frick. In the Northwest 35 Frick machines serve the Pacific Fruit and Produce Co. alone. Growers everywhere are now building Frick refrigerated storages right on their farms. Ask us how little they cost and how much they save.

The 120,000-bbl. Va. Apple Storage built at Winchester in '29 has since paid for itself.

DEPENDABLE REFRIGERATION SINCE 1882
FRICK CO.
WAYNESBORO, PENNA. U.S.A.

Plant cuts oil consumption *and* maintenance costs



From six different Texaco Capella Oils, you can select viscosities ranging from 80 to 500 sec. SUV at 100 deg. F. They are made and kept moisture-free in refinery-sealed containers . . . for your protection. Order them in 55-gallon drums, 5-gallon, or 1-gallon cans.

A large cold storage plant has been able to cut refrigerating oil consumption several barrels a year. In addition, they have made substantial savings in maintenance costs.

They effected this reduction in consumption by taking the recommendations of Texaco lubrication engineers cooperating with their own personnel.

Having 6 different viscosity grades of Capella Oils at their command, Texaco engineers are able to select grades that meet your exact needs. If you are using oils that cause undue sludging or react with refrigerants, change over to Texaco Capella Oil.

Trained refrigeration engineers are available for consultation on the selection and application of Texaco Capella Oils. Prompt deliveries assured through 2070 warehouse plants throughout the United States.
The Texas Company, 135 E. 42nd St., N. Y. C.

FREE—*56 pages of valuable information on present-day refrigerating machinery lubrication. Write today for your copy.*

TEXACO
CAPELLA OILS

AIR CONDITIONING AND REFRIGERATION NEWS

Trade Mark registered U. S. Patent Office; Established 1926 and registered as Electric Refrigeration News

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New Homes and Air Conditioning

NEW HOMES aren't going up as fast as both industry and the government have hoped. Nevertheless, the trend is definitely forward. Statistical experts are prophesying that by 1940 the home construction boom will be in full swing.

F. W. Dodge Research Corp. has predicted that between 200,000 and 225,000 new homes will have been built by the end of the current year. This compares with 150,000 new homes in 1936, 70,000 in 1935, and 40,000 in 1934. The record low year (of recent times) was 1933, when only 25,000 new homes went up.

For anyone unacquainted with what a poor showing has been made in the last several years—especially in view of population increases and rapidly increasing obsolescence—a glance should be taken at the figures of the 1920's. In 1928, for example, *one-half million* new homes were erected.

There, now, is a mark to shoot at. Yet it is being freely predicted that when the incipient building boom gets under way, the 1928 record will be topped well over—not only in one, but in two or three successive years. The need for new single and two-family dwellings is mounting steadily; and sooner or later people are going to put them up.

Like everything else in this country, when it comes, it will come fast—in a wave. And it will be the making of the air-conditioning business; for a home not air conditioned will be like an automobile without a self-starter.

The air-conditioning industry must be prepared to meet this prospective avalanche of business; and it must prepare the hard way. There is no royal road to selling air conditioning. It is a new science, and it must be learned.

Distribution through Plumbers Looked Like the Easy Way

Because it seemed the easiest thing to do, air conditioning for homes has been marketed to a considerable extent through plumbing and heating outlets. These latter supposedly understood ventilation, ductwork, and heating. Refrigeration men, it was felt, didn't. So manufacturers went to the plumbers, even though they knew that the plumbers were notoriously poor merchandisers.

But it has turned out that the heating-and-ventilating people are just as much at sea when it comes to refrigeration as the refrigeration men felt themselves to be about heating. And as a result, much of the so-called air-conditioning equipment which is currently going into new homes is nothing more than improved *heating*.

This trend has been aided and abetted by the manufacturers of heating equipment. Sensing a potential threat to their business in this new science, the makers of oil burners, stokers, and furnaces have rushed to revamp their products and advertise them as "air conditioners," instead of heating appliances, as they truly are.

As a matter of fact, the heating and ventilating industry has attempted to appropriate the name, "air conditioning."

Now the general public, which so quickly embraced the idea of air conditioning, thinks of it in terms of "cooling." Refrigeration of the atmosphere was the dramatic feature of air conditioning which first caught the public fancy, and is *still* the most potent sales appeal for the installation of a complete system.

But the heating and ventilating industry has been doing a whale of a job of eradicating that idea from people's minds. The manufacturers couldn't make refrigeration; the plumbers couldn't understand it nor install it. And everybody complained that it was expensive.

Sales Tactics Which Are Hurting the Business

So, to protect the business which they had always enjoyed, a concerted effort has been made to teach the public that "cooling" is really a relatively unimportant function of air conditioning. And much, *much* too expensive.

"If you really want cooling," they tell prospects, "you don't need to spend your money for it now. Just put in our system; and if, at some future date, you want to add cooling, you can hook it onto our system."

And because of the number of people who are out making such statements, altogether too many supposedly "air-conditioned" new homes are not fully air conditioned at all.

In addition to the business this attitude is costing the refrigeration industry, it is also putting obstacles in the path of the future development of the air-conditioning business. Upon the building of good will, of consumer satisfaction, of user advertising, depends the growth of any new industry. And half-completed installations won't help the youthful air-conditioning industry attain the stature it could have.

People who visit a so-called air-conditioned home during the warm months are going to leave unimpressed, saying "this air conditioning thing isn't what it is cracked up to be"; or, "I'll wait until they get it perfected."

Initial Installations Should be Complete

The first installations of any new product should be not only carefully made, but *complete*. They are the finest promotion any new business could have. And no air-conditioning salesmen should be encouraged to get just half an order.

In the field of air-conditioning *present* homes, the heating men have made practically no progress. This is a field for specialty salesmen altogether, and the specialty selling firms have been getting most of this type of business. A person who already has a home, with heating system installed, generally wants cooling and "nothing but." Room coolers are usually what this type of prospect eventually purchases.

Existing Homes Offer A Tremendous Market

Nobody can gainsay that this is a tremendously important market. There are tens of thousands of existing homes which are not likely to be supplanted by new ones, no matter to what heights the projected building boom may go.

Families who live in such homes are rooted in them. They like the neighborhood—may even like their neighbors! They find the location convenient—to their work, to schools, to churches. Most of them have been pretty well paid for, and are proudly held as a family investment.

Owners of these homes have excellent credit ratings. They are excellent prospects. Their sole concern now is the *improvement* of their homes, toward which end they have been buying radios, refrigerators, washing machines, and ranges. They are now ripe for air-conditioning units. And this is a market which the specialty dealer—the dealer who is experienced in refrigeration—can go after with signal success.

Air Conditioning and Cooling Should Be Inseparable

Air conditioning and refrigeration are inseparable—or should be. Refrigeration has become enormously successful through the employment of specialty merchandisers. These dealers have learned refrigeration thoroughly, and can apply that knowledge to air conditioning.

The plumbing and heating trades have as yet shown little aptitude for acquiring knowledge of refrigeration. They have never shown any aptitude for selilng. Their present moves are all being made with a view toward *swallowing* air conditioning, toward getting it under control.

If successful, they will not only prevent air conditioning from becoming a big business, they will *kill it* as a business. It is time that the air-conditioning and refrigeration industry recapture the business it launched, before it merely becomes an assimilated part of the heating and plumbing trades.

LETTERS

No Intent to 'Crucify' Ammonia Machines

Baker Ice Machine Co., Inc.
Omaha, Nebr.
Nov. 5, 1937.

Editor:

The Baker Ice Machine Co., Inc., being one of the pioneer manufacturers of mechanical cooling equipment, and having placed on the market the first commercially successful vertical enclosed type ammonia compressor, and following up with later development of the methyl chloride and Freon refrigerating equipment—we are more or less familiar with the different design of compressors used in connection with mechanical refrigeration and their service demands. Therefore, we were somewhat amused over an article appearing in the Oct. 27 issue under the signature of Mr. K. M. Newcum entitled, "Ammonia Machines Demand Frequent Attention and Offer Opportunity to Service Men."

We are wondering if it was the good intention of Mr. Newcum to direct the attention of the late graduates from the engineering schools to the potential field in the ammonia type of refrigerating plant—or, to the contrary, if Mr. Newcum merely wishes to differentiate between the high efficiency and long life of ammonia type of plants versus SO_2, methyl chloride, and other sundry types.

Reading between the lines of the editorial by Mr. Newcum, it is the writer's opinion his efforts were directed to crucifying the ammonia type of plant in the hearts of our younger generation of service engineers—and what a sad mistake this is in the interest of all concerned!

Surely you realize the history of mechanical refrigeration and ice making has been builded around the ammonia type of plant, and today some of the outstanding air-conditioning plants being installed in modern hotels and other large institutions are being equipped with ammonia type of plants, and for all general cold storage, ice making, and sharp freezing work, the ammonia type of plant is indispensable.

Referring to some of the comments by Mr. Newcum in his editorial regarding "loss of refrigerant" and "excessive oil consumption," surely you realize these are misleading when compared with other types of plants using SO_2, methyl chloride, Freon, etc., as modern makes of ammonia compressors for many years have been equipped with positive shaft seals and pressure-type lubrication throughout in the smallest sizes—thus eliminating gas leaks around the compressor and undue wear on internal working parts of the compressor.

With the larger capacity compressors it is true a semi-metallic packing is used in connection with the crankshaft seal, however, a metal lantern or oil reservoir is located (between the layers of packing) into which oil under pressure is maintained to hold the ammonia gases from leaking out of the compressor. The soft packing in turn holds the oil pressure from leaking either way.

It is also true that some of the prominent manufacturers of low-pressure gas machines advocate the "junking" of their plants in from five to 10 years, claiming them to be obsolete and *why* is such a statement true facts? Simply because the desire and endeavor of such manufacturers apparently has been, and always will be, to make a piece of equipment as cheaply as possible, regardless of high efficiency or life of the equipment.

Such is not true with the ammonia type of plant due to the fact higher pressures are encountered, and superior workmanship must be incorporated in this type of plant.

The use of galvanized steel fin tubing in fabricating evaporator surface in connection with ammonia refrigerating plants has given this type of plant higher efficiency and greater economy in operation than with the low-pressure types of plants, and history has proven the long life of ammonia refrigerating plants as compared with other makes.

Therefore, I believe in the interest of all parties concerned, you would be justified in clarifying some of the comments made by Mr. K. M. Newcum in his editorial as referred to in this letter.

Assuring you of our interest and hearty cooperation.

F. E. HARTMANN,
General Sales Manager.

Answer: Let's clear up one point first then go to some of the others. Purpose of the article was *not* "to crucify the ammonia plant in the hearts of our younger generation of service engineers," but was to help prevent the further crucifixion of ammonia plants by these service men by encouraging them to solicit service work on ammonia machines.

A large percentage of competent service engineers will not render service to ammonia machines. They give two main reasons. First, they have enough business on SO_2, methyl chloride, and Freon-12 systems. Second, they say that they do not know enough about ammonia machines and therefore declare a hands-off policy.

Result is that small ammonia machines are being replaced by the other types because (1) they are more expensive to operate (if the condenser is not cleaned at regular intervals) and (2) service in many localities is difficult to obtain. Service engineers of the younger generation are advising the merchants to install new SO_2, methyl chloride, or Freon-12 jobs and save the difference in operating and maintenance cost.

The idea which we tried to get over in the article was to encourage service engineers to give ammonia systems in their territory the necessary attention to keep them operating efficiently, profiting thereby and saving the user the needless expense of high water and electric consumption.

We are not attempting to take the stump for any particular refrigerant or type of system. We do believe that ammonia systems have played an important part in the industry and still are. For that reason we attempted to point out to service engineers the profit to be gained from servicing ammonia machines.

Irving Alter Speaks on 'Pirating' of Catalogs

The Harry Alter Co.
1728 So. Michigan Ave., Chicago
Nov. 11, 1937

Mr. Cockrell:

After reviewing our conversation during the rush and excitement of the convention, I am not sure that I made myself clear. There is not any question in my mind regarding the legal standing of a copyright owner. Our lawyer tells us that if a copyright owner is able to prove originality, either of illustrations, or of descriptive matter, including the layout of the catalog, he is entitled to damages amounting to twice the reasonable market value of the infringement, in addition to any fine which the presiding judge may feel is justified.

In several instances, we have enforced our rights and secured settlement. In other cases, we have been content to accept apologies and promises to avoid a repetition of the offense, because it was apparent that our material was used without the knowledge or consent of a responsible executive.

What I was trying to secure from you was how you handled similar situations and what you did or what we can do to prevent further infringements. I am certain that you must have numerous infringements on the material which you assemble and publish in the NEWS and in some of your other publications.

Isn't there any publicity which you could give to this situation which would make people realize that when anyone does an original work, whether it is writing a song, drawing a picture, or such a prosaic thing as a catalog, the author puts into it his own knowledge, experience, ingenuity and intelligence?

I will pass lightly over the items of intelligence and ingenuity inasmuch as I have personally developed the Harry Alter Co. catalog. However, I do feel that my knowledge and experience as represented by hours and days, weeks and even months of time, represents a value of several thousand dollars, even if figured at carpenter's wages. When others use this material by planographing illustrations or copy, or, as has happened in some cases, whole sections of our catalog, we naturally feel that such acts are a trespass upon our property.

To put the matter bluntly, the use of such material is nothing less than appropriation of our property without proper compensation. We are inclined to feel more embittered by the unreasonableness of the act than by the loss in dollars and cents.

We feel that this matter is a rather delicate subject, because we wish to remain on friendly and cooperative terms with all of our competitors. We are not afraid of competition of the better sort and we do not wish to be placed in a position of a fault finding competitor. The Harry Alter Co. would like to go on record and state clearly and firmly that they do not wish to have any controversies or law suits with their fellow jobbers.

I have felt that some publicity should be given to the copyright situation so that our catalog copyrights would be respected, and that the same respect be accorded to others who have expended time and money in the preparation of original material. I believe that most infringements are made through the ignorance of the copyright laws and that a clear understanding of them would eliminate this practice.

The publicity which you can give through your publication would be of definite help to our industry.

IRVING ALTER

Norge Goes Commercial

Walter Landmesser, new manager of the Norge commercial refrigeration department, tells associates how he plans to expand this division of Norge's many-sided activities.

Ice Water Used to Cool Oklahoma Hotel Guest Rooms

BARTLESVILLE, Okla.—Air-conditioning equipment consisting of two 50-ton compressors, unit evaporators equipped with blowers, coils, and controls, ice water tanks, and a complete duct system has been installed in the Hotel Maire here by Howard E. Melton, Inc., Oklahoma City distributor of Delco-Frigidaire products.

Centrally located in the basement, with connected individual conditioners in various parts of the building, the 100-ton system air conditions the hotel's guest rooms, coffee shop, dining room, banquet hall, and apartment annex.

Ice water is circulated through the individual conditioners, and from these the cooled air is carried through ducts to the conditioned rooms. Temperature in each guest room of the hotel may be regulated by its occupant.

Ice Industry Creates New Merchandising Department

CLEVELAND—Creation of a new merchandising department and adoption of a seal of approval for ice refrigerators were ratified by almost 2,000 ice and refrigerator executives at the 20th annual convention of the National Association of Ice Industries held here last week.

Announcement was made at the advertising session of the convention, directed by Hurley G. Hust, advertising director of National Ice Advertising, Inc., association subsidiary.

The new seal, which is to be placed on ice refrigerators conforming with standards of performance and construction agreed upon by the NAII and the affiliated National Ice Refrigerator Manufacturers Association, is inscribed: "Tested and Approved by the National Association of Ice Industries."

Sales and advertising helps will be offered to the 15,000 ice companies selling refrigerators by the new merchandising department. Intended to integrate local ice refrigerator promotion with the national program, the department will distribute monthly bulletins concerning sales planning, sales promotion, training of salesmen and service men, and local advertising.

The "Home Makers Exchange," radio program conducted by Eleanor Howe, NIA home economist, will be rebroadcast twice weekly over 51 new stations during 1938. Featured will be a letter-writing contest, the theme being, "Why I would like to own a new air-conditioned ice refrigerator." Fifty ice refrigerators will be given as prizes.

Increased national magazine and trade paper advertising, more news releases, and further home extension work, particularly in farm areas, are planned for the coming year.

Ice companies will contribute at the present rate of three cents per ton, and 11 ice refrigerator manufacturers will donate at least 25% more to provide funds for the 1938 promotion campaign, according to Robert C. Suhr, president of NIA.

It was announced at the convention that sales of ice refrigerators for the year ended Sept. 30 totaled 600,000, a 5% increase over the preceding year and a rise of almost 300% since 1932. Sale of ice dropped 8% to a total of 38,000,000 tons.

John R. Walker, financial counsel of Washington, D. C., told the convention that in his opinion the prevailing 6% interest rate on instalment contracts is too low, and should be boosted to 8%, with a possible 2% rebate when payments are made on time. Aim of the advised increase is to offset the difficulties of collection delinquencies.

Swope Visits G-E Refrigerator Company in England

LONDON, England — Gerard Swope, president of General Electric Co., took time out from a recent trip abroad to visit the showrooms of International Refrigerator Co., Ltd., subsidiary of International General Electric Co.

Among officials of the London firm whom Mr. Swope met and talked with are: C. W. Barnett, chief commercial engineer; A. W. Weekes, product manager; R. J. Simpson, joint managing director; G. N. Robbins, provincial sales manager; J. Stewart, chairman of the board; and A. R. Crew, sales promotion manager.

Competitive Problems Not All Solved by Law, Miller Says

HOT SPRINGS, Va.—Passage of recent state and federal fair trade legislation must not lull business into considering all its competitive problems solved, U. S. Senator John E. Miller of Arkansas, co-author of the Tydings-Miller fair trade law, told the convention of the Association of National Advertisers here recently.

"The mere fact that you have won a victory is no sign to let up," Senator Miller said, "for unless you demonstrate that you have the ability, intelligence, and courage to govern yourselves, then you may rest assured that someone else will govern.

"People lose the power to govern, and a business loses the power to regulate itself, by failing to excercise that power. How you shall exercise that power is for you to determine."

Turning to the activities of the opponents of fair trade legislation, Senator Miller urged that the "false be separated from the true." Propaganda now being released against fair trade legislation, as well as that to be released in the future, is something that business must ever guard against, he declared.

Legislation can easly be repealed, he pointed out, and the mere fact that the Tydings-Miller bill was enacted at the Congress' last session is no guarantee that it will forever remain on the statute books.

"The future of America is bound up in the welfare of the small man in business, on the farm, and in industry," he said. "Against the threat of all the alien 'isms' that so beset the world, only the small business man and farmer and laborer stand up as a bulwark and a defense to preserve the American system and tradition.

"Concentration of ownership of industry in a few hands may presently increase efficiency, but this concentration will lead to lower wages, longer working hours, serious and disturbing labor strife, and the decay and death of democracy of opportunity.

"These conditions are a challenge to every man in America. The philosophy of dog eat dog and devil take the hindmost in business practices has no place in this country. Competition to insure protection to the consumer, to the laborer, and to us all, must remain free and have definite legislative standards.

"These safeguards may be furnished, but in the last analysis the determination of most of these questions is left in the hands of business itself. As long as business recognizes the right of the producer and the consumer to honest competition between those from whom they buy, it will be allowed a comparatively free hand.

"But when the rights of these groups are subjected to the selfish desires of business, then the people themselves will demand that the government assume control of business in every phase. These are the problems you can help solve under the fair trade practice acts."

Edward S. Rogers, California attorney and author of part of his state's fair trade law, the first ever passed, denounced the term "price-fixing" generally used by opponents of the laws, in a discussion of the legal side of the legislation.

He emphasized that none of the fair trade acts is regulatory, being permissive only, and in no instance requiring a manufacturer to enter into price maintenance contracts with his distributors. Basic aim of the laws is to eliminate loss leader and "bait" advertising, he pointed out.

Referring to the damage inflicted on branded articles by predatory price cutters, Mr. Rogers defined good will as "collective friendliness toward a product." In reality, he declared, the price cutter is the price fixer; for the lowest price invariably becomes the market price.

F. A. Eustis Making Tour of South America

BOSTON—F. A. Eustis, secretary and treasurer of Virginia Smelting Co., refrigerant manufacturer, is now on a combined business trip and honeymoon to South America.

Included in Mr. Eustis' itinerary are the following cities: Rio de Janeiro and Sao Paulo, Brazil; Buenos Aires, Argentina; Santiago and Valparaiso, Chile; Lima, Peru.

G-E to Spend $4,000,000 On Appliance Advertising

CLEVELAND—A $4,000,000 advertising and promotion program for General Electric Co.'s household appliances, largest appliance campaign in the company's history, was announced for 1938 by A. L. Scaife, manager of the advertising and sales promotion section, at G-E's annual distributors convention held recently in the public auditorium here.

Advertising schedule, according to Mr. Scaife, includes space in 31 national magazines, 39 trade publications, and newspapers in 125 cities. In addition, the company will use 17,000 billboard posters.

Since G-E's 1938 appliances are to be introduced Dec. 1, a special Christmas season drive will be staged. Christmas-theme advertisements will appear in American Magazine, American Home, Better Homes and Gardens, Collier's, Good Housekeeping, Ladies' Home Journal, and Saturday Evening Post, Mr. Scaife told the assembled distributors and public utilities executives.

General Electric advertisements will appear in the gravure sections of numerous newspapers throughout the country on Sunday, Dec. 5.

Continuation of the G-E radio program, the "Hour of Charm" featuring Phil Spitalny's all-girl orchestra, was announced by Mr. Scaife as the orchestra itself appeared on the stage of the convention hall.

MORE COLD WATER PER HORSEPOWER USED

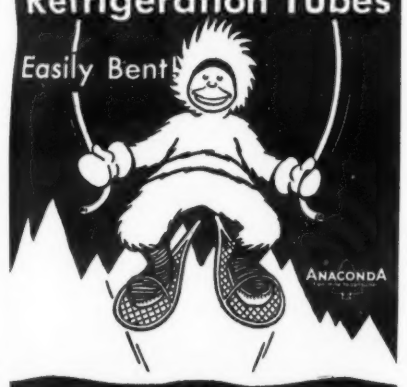
Elimination of all line losses is the secret of exceptional economy in the Temprite Mutiple System of Instantaneous Water Cooling, Cold Water piping is not used. Water is cooled at the bubbler, only as used. Water, refrigeration, and time are saved. You get more cold water per dollar.

Each fountain has individual temperature control. Outlet temperature is maintained as set, regardless of weather, load or inlet temperature.

Write for Bulletin W-2.

TEMPRITE PRODUCTS CORP. Detroit, Mich.

Anaconda Copper Refrigeration Tubes Easily Bent



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DETROIT, MICHIGAN

The Distributor Who Sells the Copeland REFRIGERATION LINE

IS BUILDING GOOD-WILL FOR YEARS TO COME!

It is just good business foresight to sell your customers a quality-built Copeland product. Whether you sell a Copeland Household Refrigerator, Commercial Refrigeration, Washer or Ironer, you are wisely building up a backlog of long-time customer satisfaction that will pay you dividends in continued patronage for many years.

Write for Sales Plan
COPELAND REFRIGERATION CORPORATION
Holden Ave. at Lincoln — Detroit

REFRIGERATION EQUIPMENT by KRAMER of TRENTON

New KRAMER Refrigeration Equipment Catalog Send for Your Copy

TRENTON AUTO RADIATOR WORKS, Trenton, N.J. NEW YORK PITTSBURG

SEND FOR THIS

TODAY, over a million TAG Controls are in daily use on gas and electric refrigerators of both domestic and commercial types, as well as in the air conditioning industry. This general acceptance of TAG Products marks them unmistakably for Distributors of Refrigeration Equipment as the top choice for replacement services. The TAG Catalog No. 1136-25 shown here describes completely the line of TAG Snapon Controls and Test Equipment for refrigeration service. Ask for your FREE copy today.

CONSULT YOUR JOBBER ABOUT TAG CONTROLS AND TEST EQUIPMENT

C. J. TAGLIABUE MFG. CO.
Park & Nostrand Aves.
Brooklyn, N.Y.

use this COUPON

Gentlemen: Please send me a copy of the new 1937 TAG Snapon Control Catalog No. 1136-25.
Name .....
Address .....
City & State.....

Cabinet Interior Features Are Improved in 1938 Line Of Stewart-Warner

(*Continued from Page 1, Column 1*)
series comprises six models, three with porcelain exteriors, sized from 5.5 to 7.5 cu. ft. storage capacity. Three models are in the Master series, and range in size from 4.5 to 6.3 cu. ft. capacity.

The Sav-A-Step, leading feature of the 1937 Stewart-Warner line, has been retained, with additional refinements, in the 1938 models of the Deluxe series. This convenient shelf section, which swings out to make foods stored behind it more accessible, and which has storage space for all the most-used foodstuffs, has been made larger and is equipped with stronger support bearings.

REARRANGING SHELF

Another 1937 Stewart-Warner feature, the Slid-A-Tray, rearranging shelf located in the lower compartment, has been made easier to get at, and is equipped with a pneumatically controlled release action to prevent sticking.

Improved cold control is of the airplane type which the company has had in its models of the last two years; this new control, however, has a 16-point range, divided into summer and winter positions and arranged so that it may easily be understood by the housewife.

PORCELAIN EVAPORATOR

Evaporator is larger in new models, and is porcelain covered, to make it easier to clean as well as non-odor absorbing. More even temperature is also claimed by the company for this type of evaporator. One of the evaporator shelves is removable, to provide room for double-depth trays in freezing desserts.

Ice tray space has been increased, and Deluxe models each have one "Instant Cube" tray, an all-metal tray equipped with levers on either end, which is said to loosen cubes instantly and easily without necessity of holding the tray under a faucet.

Another innovation on the new S-W models is the cold storage chest, located in the space formerly occupied by the defrosting tray. In addition to serving that purpose, the storage chest may also be used to store additional ice cubes, or for meat, fowl, or desserts which require lower than normal temperatures.

EVAPORATOR DOOR DESIGN

Evaporator door has been decorated with a horizontal chrome bar and fitted with Tenite knob, adding to interior cabinet beauty. The door, as was the case in the 1937 S-W models, is changeable, and may be located at either side of the evaporator compartment, the hinges clamping to the side wall.

Interior of the 1938 models is finished in a triple coat of porcelain, and all cabinets in the line are being treated by the Bonderizing process, to prevent rust. Bottom front of the interior liner has a recess, for catching spilled foods. Corners are rounded for easy cleaning.

BUILT-IN THERMOMETER

Another feature of the line is a built-in thermometer, attached to the left wall of the cabinet interior, and calibrated in actual degrees, so that the exact cabinet temperature may be ascertained.

Tilting shelves are placed at either side of the evaporator; these may be left down, if small foods are to be stored, or tilted up to provide room for tall containers or bottles.

Shelf just below the evaporator is of the pull-out type, and may be slid out to reach foods stored at the rear, or taken out entirely to carry foods from the refrigerator. Guide rails are at either side to prevent spillage. The shelf behind the Sav-A-Step also slides out, to make the food stored there more easy to reach.

Vegetable freshener and fruit basket, located at the bottom of the cabinet interior, are fitted in guides to permit them to be pulled out more easily, and have more capacity than those in last year's models.

A three-piece "handy set" is also included in all Deluxe models. This set, of porcelain and glass-covered, has one large and two small containers. Designed for left-over storage, the containers also may be used to heat their contents, without the necessity of using extra pans.

STREAMLINED HARDWARE

Hardware has been streamlined, and is chromium plated; a new door latch, of the "feather-touch" type, also has been added.

Insulation in the new S-W models is Fiberglas, the glass-wool insulation. Three inches are used in all models, in top, sides, bottom, and door.

Use of the new insulation and other cabinet improvements, among which are an all-metal door, "vapor-sealed" construction, are claimed to reduce heat leakage for 1938 S-W models by as much as 15%.

The twin-cylinder Slo-Cycle compressor, heart of the S-W refrigerating system since its introduction, with the exception of one year, has been retained in the company's 1938 models.

MECHANICAL IMPROVEMENTS

Improvements in mechanical construction of 1938 units include the use of belt-tightener motors in all but the two special models, 550 and 770, and the use of an automatic overload protective device in all models.

In addition to the regular models, Stewart-Warner also is producing for 1938 two special models, of 5.64 and 6.3 cu. ft. capacity, respectively. Except that the twin-cylinder compressor is used in both models, the units are without other features of the regular line.

However, the units have an 11-point cold control, covered evaporator door, glass defrosting tray, chromium hardware, and interior porcelain finish. Exteriors of the two special models are of Dulux.

5-YEAR PROTECTION PLAN

Delivered prices of all 1938 models will include the five-year protection plan. Last year, this plan was optional, but it has now been extended to cover all models without variation.

Distributors and dealers may also make the plan apply to all 1937 models still on their floors, by registering the units' serial numbers with the factory. The $5 charge is added to the regular selling price, in this case.

John F. Ditzell, sales manager for refrigerators and radios, was in charge of last week's distributors' convention.

'NOW READY TO GO'

Opening the sessions, James S. Knowlson, chairman of the Stewart-Warner board of directors, told distributors and field men that the company is now ready to step into the front rank in the refrigeration field, after several years of preparation during which it has been watching the leaders from the "crowd."

Pointing to Stewart-Warner's purchase of the Marmon plant in Indianapolis to provide more space for refrigeration manufacturing operations, Mr. Knowlson cited this as an instance of the company's belief in the future of the industry and of its own distributing organization.

PRESENT STATE OF 'JITTERS'

Despite the fact the business skies are darker at present than they have been for some months, and the country is in a state of "jitters," Mr. Knowlson said the company is proceeding in the confidence that conditions will soon return to their normal state.

None of the automobile companies for which the company furnishes materials have curtailed production because of the recent Wall St. slump, he said, and Stewart-Warner is taking its cue from their actions, as well as from its own convictions.

The newly acquired plant in Indianapolis, Mr. Knowlson said, will be used for the manufacture of other household appliances in addition to refrigerators. He did not say what these products would be.

BETTER DEALER COVERAGE

More efficient dealer coverage will be a major objective with Stewart-Warner this year. To be sure that distributors, in their dealer showings, tell the 1938 line story as the company wishes it should be told, a sound movie film has been prepared. In fact, it tells the story so efficiently that company officials chose it ahead of any words of theirs in showing the 1938 models to distributors at the convention.

Titled "Seeing the Light," the film is in two reels, first of which tells the story of the product itself, its economy and convenience features, and the "quality" manufacture back of it; the second part tells of the company's advertising and sales promotional plans for the coming year.

In addition to detailing all the features of the 1938 S-W line mentioned above, first part of the film also shows graphs of Stewart-Warner sales progress since its entry into the refrigeration field, compared with all-industry progress during the same period.

During 1935, according to the charts, Stewart-Warner's sales rise was 25.3% compared with 16.4% for the industry as whole; during 1936, the company's sales rise was 76.8% compared with 45% for the industry; and this year the company claims a rise of 42.1% over 1936 sales, compared with an estimated average of 15% for the industry as a whole.

Following the showing of the line, Mr. Ditzell opened his discussion of dealer coverage, which he said will be a much more important item, from the company's standpoint as well as that of the individual distributor, than ever before.

SELECTION OF DEALERS

Dealer coverage, he pointed out, should be planned before the line showing, whether it be formal, informal, or sectional in character. He advised distributors to prepare their dealer lists carefully in advance of the presentation date, to be consistent in their follow-up tactics, and to pay particular attention to reputable firms not now selling refrigerators.

Getting away from the beaten path in dealer-getting, he declared, may pay dividends if the distributor succeeds in lining up aggressive merchants, well thought of in their communities, who have not sold refrigerators in the past.

He advised careful follow-throughs on all prospective dealers after the line showing. Every distributorship, if it wants to better its 1937 sales mark, must come up with additional dealerships in the new year, he declared.

"You can't expect to get more business, in 1938, with the same number of dealers you had this year," he said. "Retain the dealers you now have, but spend your best efforts in getting new outlets."

Refrigeration today is purely a merchandising proposition, Mr. Ditzell said in urging the establishment of dealerships in business houses which have not previously been in the refrigeration field. If a merchant can sell other merchandise, he can sell refrigeration as well, he declared.

Tangible evidence that Stewart-Warner intends to step up into refrigeration's "big league" in 1938 was given in the part of the company's film covering advertising and sales promotion, shown to distributors at the opening day's afternoon session.

ADVERTISING PLANS

In addition to the Horace Heidt radio programs, which will switch to an NBC network on Jan. 4, and on which refrigerators will be featured during the early spring season, the company has scheduled a program of magazine advertising in both the "Saturday Evening Post" and "Collier's."

Also available are mats for local newspaper advertising by distributors and dealers, billboard posters, background panels for more effectively displaying the new models, a special Christmas display, a store banner, several electric signs, and an electric clock display sign.

Sales helps include a Sav-A-Step demonstrator, a sales manual for use by dealers in learning the most effective presentation methods, a presentation book, line folders, envelope stuffers, a rotogravure broadside, and several smaller direct-mail pieces.

Other materials for demonstration include a cutaway section showing cabinet construction, a Glass-Wool insulation demonstration kit, and cutaway compressor model. Small

(*Concluded on Page 15, Column 1*)

S-W Plans to Have Prospects 'See the Light'

The salesman in this picture is showing the comely prospect the location of the Econ-O-Lite, a small light on the front of cabinet which goes on only when the refrigerating unit is running. This light is designed to give substance to the "economy story" which Stewart-Warner will stress in its 1938 refrigeration sales campaign.

CONDENSERS • EVAPORATORS •

FOR EVERY MODERN APPLICATION

Quality and efficiency are the outstanding features of Long condensers and evaporators. Condenser units of tube and flat continuous fin construction, in copper and steel, give maximum heat dissipation per pound of material used, and collect less dust. Available in both domestic and commercial units for electric refrigeration and air conditioning applications.

LONG MANUFACTURING DIVISION
BORG-WARNER CORPORATION
DETROIT, MICHIGAN
WINDSOR, CANADA

LONG

Anaconda Copper
REFRIGERATION TUBES
They Flare without cracking
THE AMERICAN BRASS CO.
FRENCH SMALL TUBE Branch
General Offices: Waterbury, Conn.

USE DRIERITE FOR DRYING
Anhydrous Calcium Sulfate
Air
Refrigerants
Industrial Gases
Write for Literature and Quotations
W. A. HAMMOND, YELLOW SPRINGS, OHIO

Better Dealer Coverage Is Backbone of Stewart-Warner's Merchandising Plans for 1938 Refrigerators

(*Concluded from Page 14, Column 5*)

promotion gifts available to dealers are pencils, balloons, lighters, similar to those the company used in promoting its 1938 radio line.

Further keynoting the dealer coverage theme, Mr. Ditzell announced that Stewart-Warner had made arrangements with C.I.T. Corp. for cooperation in promoting a "free floor plan" for dealers; and, to increase

Ice Tray Release

A new ice cube release is one of the added convenience features in the 1938 Stewart-Warner refrigerators.

holiday business for retailers, a special Christmas finance plan for purchasers of Stewart-Warner refrigerators during December.

DISPLAY REFRIGERATORS

Under terms of the dealer floor plan, dealers acceptable to C.I.T. and Stewart-Warner may purchase a minimum of three or a maximum of six refrigerators for display and sales purposes, and have three months in which to pay for them.

For this service, the dealer pays a finance charge of but 10%, instead of the 20% common with most other floor plans. The factory assumes the other 10%, as well as responsibility for the transaction.

The plan is limited to 1,000 dealers, on a "first come, first served" basis.

The special Christmas finance plan provides that, for refrigerators purchased during December, no payments other than the down payment need be made by the purchaser until March. In addition, the usual ½ of 1% finance charge during the skip-months is waived. Otherwise the plan is similar to the one offered by Stewart-Warner last year.

Maximum time on all contracts is 30 months; so that, in making a sale under the Christmas plan, the unpaid balance is divided into 28 (instead of 30) monthly payments.

Down payment of a minimum of 10% cash, trade-in, or a combination of the two is required on all 30-month contracts. However, if the contract is limited to 24 months, a down payment of 5% cash, trade-in, or a combination of the two will be acceptable.

Closing the first day's session with a brief talk on the place which Stewart-Warner is carving for itself in the household appliance industry, F. A. Hiter, vice president and general sales manager, discussed the company's 1938 product, and sales and advertising plans back of it.

Stewart-Warner is prepared for immediate business, he pointed out to distributors. Samples for display are already on their way to distributors, he declared, and the company will be prepared to fill selected orders within 10 to 14 days.

With this preparedness on the part of factory officials, distributors and dealers should be in an advantageous position in dealing with Christmas-time prospects, he said.

SECOND DAY'S PROGRAM

Advertising, sales promotion, and finance plans discussions occupied center-stage during the convention's second day, following presentation of the annual Executives' Award and President's Cup to the Kane Co., Cleveland, and Stewart-Warner Distributors, Chicago, for outstanding 1937 sales work, and presentation of plaques to distributors exceeding their 1937 quotas and to distributors' salesmen who qualified for membership in the Brigadier's Club, honorary sales organization.

Outlining the company's advertising plans for the coming year, Hays MacFarland, head of Hays MacFarland & Co., Stewart-Warner's advertising agency, said that the company's total expenditure on refrigeration in 1938 will pass $750,000.

CHANGING AUDIENCE

Dealing more with the thought back of the company's advertising than with the advertising material itself, Mr. MacFarland emphasized that, to be really effective, advertising must keep repeating the same story, because its audience is constantly changing.

Two million Americans, he said, have never seen an elephant—because they were born only this year. In the same way, he continued, millions who were not interested in the past are now considering the purchase of an electric refrigerator. So, to millions of Americans, what seems an old story is really something new—because they're just beginning to be interested in it.

Stewart-Warner's radio and national magazine advertising, he declared, will reach an audience of 12 million people. The magazine campaign will open in the April 9 issue of the Post, and in Collier's of April 30. The full-page four-color smash will be followed, in both magazines, by four half-pages; these smaller

New Sliding Tray

The sliding tray in the 1938 Stewart-Warner refrigerators is hidden behind the panel in the base of the cabinet. A press on a button swings the panel out, the housewife loads the tray from the refrigerator and carries it off, closing the panel with her knee, as shown here.

advertisements will be in solid reverse, with black backgrounds and all selling copy in white.

Explaining Stewart-Warner's policies on cooperative and promotional advertising, C. C. DeWees, advertising manager for radios and refrigerators, emphasized that, to qualify for factory support, distributor funds must be spent either on radio, newspaper, or billboard advertising.

Money in the cooperative fund cannot be used to pay for or apply against the cost of dealer meetings, he pointed out, or trade or consumer shows participated in by the distributor. Such expenditure is considered a legitimate part of the distributor's cost of doing business, he said—and if they're not worth their cost to the distributor, then he should not enter them.

Cooperative advertising, to qualify for factory help, must feature 1938 models, and must be free from untrue or derogatory statements. No credit will be allowed for participation in cooking schools.

DEALER FINANCE PLAN

Amplifying the cooperative C.I.T.-Stewart-Warner dealer floor plan, Richard Brinsley of C.I.T. Corp. explained that its purpose was not to keep financing the small dealer, but primarily to assist him in getting into the business. Only the initial purchase, he pointed out, is financed in cooperation with the factory; on all subsequent deals, the dealer works directly with C.I.T.

After the initial three-month period, during which the dealer pays a finance charge of 10% and the factory the other 10%, the dealer may renew for one month at a time, paying a 1% finance charge, for a maximum of three months. In addition, the dealer, each time he renews, must cut down his unpaid balance by 10%.

The two alternative down payment plans, one stipulating 10% if the contract goes 30 months, the other 5% for a 24-month contract, gives the dealer a very flexible arrangement to use in lining up business, while at the same time giving the factory maximum protection, Mr. Brinsley pointed out.

SALES CONTEST PLANS

I. C. Veeck of the Stewart-Warner refrigeration department gave details of the company's Brigadier contest for distributor salesmen, which runs until Sept. 30, 1938.

Merchandise awards will be available for all entrants in the contest, with cash awards for all sales over quota, both in number of units and in lining up of dealerships. At the contest's end awards will be given in both metropolitan and non-metropolitan territories for best work by a distributor salesman. Order for three or more units is required to list a dealership to the distributor salesman's credit.

Sessions on both days closed early, to give distributors and their men opportunity to inspect "Quality Lane," exhibits of manufacturing operations and products by the company and the 17 firms who supply it with materials used in constructing its refrigerator.

PRODUCTS DISPLAY

Representatives of the companies displaying their part in Stewart-Warner production were in the booths to answer questions as to manufacturing processes and raw materials used.

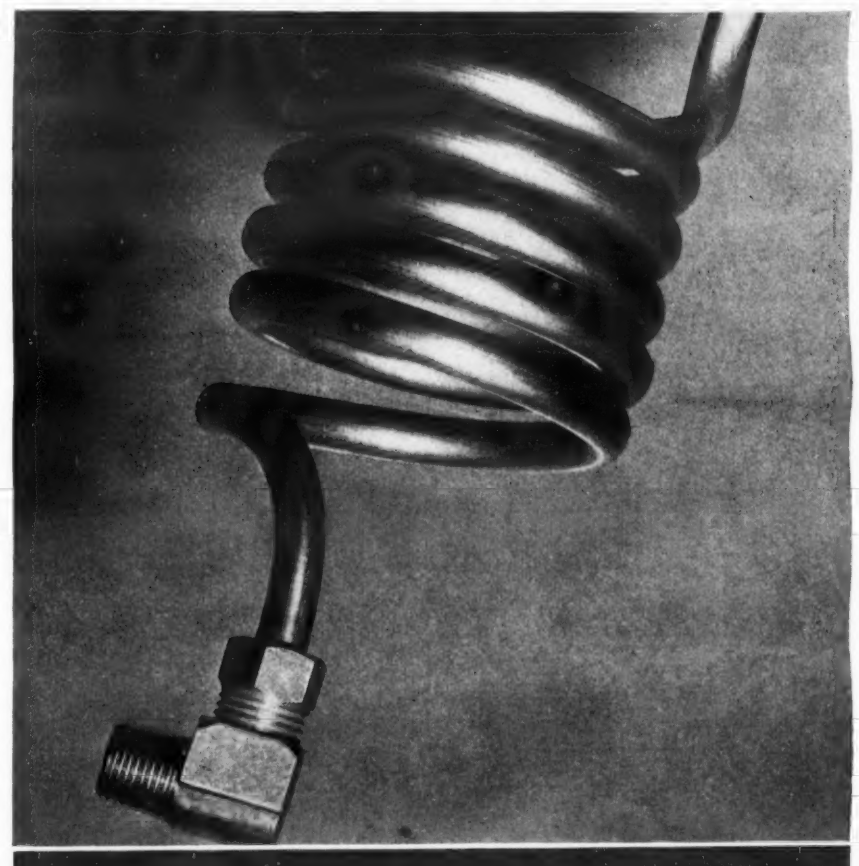
Companies displaying at the meeting included:

Owens-Illinois Glass Co., Fiberglas insulation; American Rolling Mills Co., Armco iron; United States Steel & Wire Co., shelving and baskets; Terre Haute Malleable, castings; Cutler-Hammer Co., controls; Dayton Rubber Co., belts; Bellaire Enamel Co., left-over containers; Mullins Mfg. Co., evaporators; Manitowoc Mfg. Co., ice cube trays; and Delco, motors.

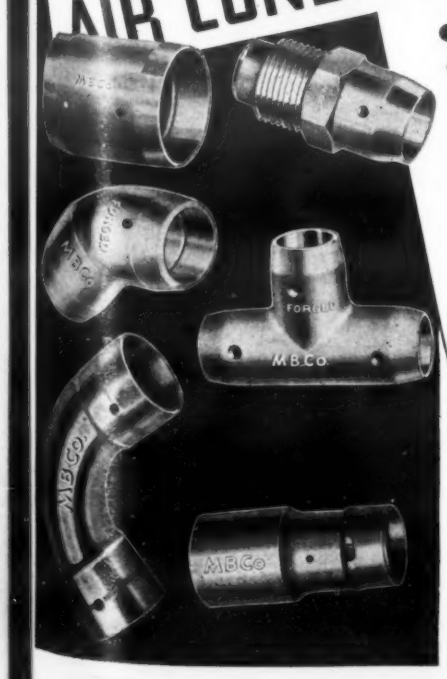
Key Specifications of Stewart-Warner Line

Model No.	Capacity Cu. Ft.	Shelf Area Sq. Ft.	No. Ice Trays	No. of Cubes	Lbs. of Ice	—Exterior Dimensions— (Inches) Height	Width	Depth
Deluxe 768*	7.5	16.8	6	136	11.75	63	33¾	24½
Deluxe 668*	6.3	14.4	4	88	7.75	59¾	30	23½
Deluxe 568*	5.5	13.2	4	88	7.75	55⅞	30	23½
Master 658	6.3	14.2	4	96	8.0	59¾	30	23½
Master 558	5.5	11.8	4	96	8.0	55⅞	30	23½
Master 458	4.5	10.5	2	56	4.0	51	23⅞	24⅛
550	5.64	13.3	4	96	8.0	55¼	28¾	23½
770	6.3	13.9	4	96	8.0	58½	28¾	23½

*Deluxe models 768-P, 668-P, and 568-P are similar in all details to the corresponding models above, except that they have exteriors of porcelain. Others have Dulux exteriors. All interiors are porcelain.



TOP PERFORMANCE FITTINGS •
FOR REFRIGERATION AND AIR CONDITIONING ★



● The use of STREAMLINE Solder Fittings assures permanently tight connections for electric refrigeration and air conditioning work. They are absolutely refrigerant and seep-proof. Vibration cannot work them loose. They form a connection actually stronger than the tubing—yet much lighter and more quickly completed, and they reduce materially your fitting cost.

Brass Forgings which have a tensile strength of approximately 60,000 pounds per square inch, are used in the manufacture of our flared tees, elbows, valve bodies, etc. Specially treated drawn brass rod is used for integral parts of valves, flare couplings, fitting caps, etc.

We manufacture the most complete line of valves, fittings (both flare and solder type) and accessories for mechanical refrigeration work. Send for catalog R-3 and Price List 2003.

MUELLER BRASS CO.
PORT HURON, MICHIGAN

★STREAMLINE
TRADE MARK REG. U.S. PAT. OFFICE
COPPER PIPE AND SOLDER FITTINGS

Bundy Tubing Contributes Owner-Satisfaction

Few purchasers or owners of your product are conscious of the kind of tubing you use; not many even know that you use *any* tubing. But they are quite conscious of the qualities which Bundy Tubing contributes to your product: dependability, safety, long life, freedom from service trouble.

Bundy Tubing's construction from copper coated steel provides great strength and resistance to vibration. Inside and outside are clean and free from oxides. It is available in a wide range of sizes, in lengths, or completely fabricated. Quotations will be gladly made from your blue prints or samples.

BUNDY TUBING CO.
DETROIT

ENGINEERING

Joe Askin Explains How to Get 'Most B.t.u. Per Coil Dollar' In Address to Service Men

CHICAGO—A discussion pointing out the principal factors involved in coil design and how to obtain the most "B.t.u. per coil dollar" was presented by Joe Askin, chief engineer, Fedders Mfg. Co., at a technical session of the fourth annual convention of the Refrigeration Service Engineers Society held at the Stevens hotel here Nov. 3 to 5.

Mr. Askin delved into the history of coils and pointed out that heat transfer surfaces made and used in the ammonia refrigeration industry 30 years ago consisted essentially of bare pipe. That serpentine coils were made of bare wrought iron pipe spaced about 6 inches apart, and mounted overhead in the refrigerator.

Ten years later when methyl chloride and sulphur dioxide began to be used for commercial refrigeration, copper tubing was used for fabricating coils, continued Mr. Askin.

"About that time another change in construction of surface occurred. Fins were added to the tubes. Reason advanced was that finned surface is more economical."

It was explained by Mr. Askin as follows: "Heat is transferred from a warmer to a colder object. Warm air passing by the surface of a tube which is colder than the air loses some of its heat. Hence the temperature of the air decreases. The amount of heat transfer is greater as the surface to which this temperature change occurs is increased.

"A tube has only its **outside** surface exposed to the warm air. A fin attached tightly to the tube almost reaches the temperature of the tube. **Both sides** of the fin are active because they are exposed to the warm airstream. Heat is conducted from the air to the refrigerant through both sides of the fin.

"Bare tube surface is known as 'wet' surface, 'prime' surface, or 'direct radiating' surface," explained Mr. Askin, "and fin surface is known as 'second' surface, 'fin' surface, or 'indirect radiating' surface."

VALUE IN COIL DESIGN

Mr. Askin then explained why the extent to which fins may be added to a tube is of importance in coil design.

"Assume that a tube consisting of 1 sq. ft. of 'prime' surface is exposed to the airstream (the surface on the inside of the tube does not count insofar as the transfer of heat from the air to the tube is concerned). Place a fin over this tube having 1 sq. ft. of surface on each side, or a total of 2 sq. ft.

"The effectiveness of a fin is its unit capacity in comparison with the unit capacity of the 'prime' or 'direct' surface to which that fin is attached. If the effectiveness of the 'direct radiating' surface of the fin were to drop to as low as 50% that fin would still be economical to use. Assume that the heat transfer of the 'prime' surface is 5 B.t.u. per hour per square foot.

"If the 'indirect' surface, or 'fin' surface, should be as low as 50%, then .50 x 5 equals 2.5 B.t.u. per hour per square foot would be the transfer of **each** side of the fin. Each side of the fin has 1 sq. ft. of surface. Hence the total transfer of the fin is 2.5 x 2 or 5 B.t.u. per hour. An amount equal to that of the tube.

"In actual practice the effectiveness of the fin is considerably greater than 50%, and in some cases it is as high as 85%. It can never quite equal 100%.

"In actual practice the fin thickness is only one half to one quarter that of the tube and with only a nominal amount of reduction in capacity. This results in a considerable saving in weight and cost of the coil."

ECONOMICAL COILS

Manufacturers have been placing a large amount of "fin" surface on tubes and obtaining economical coils, stated Mr. Askin.

"Usually the amount of 'indirect' surface is as much as 90 to 95% of the total surface," claims Mr. Askin. "The effectiveness runs well above 50%. From this it can be readily seen why a finned coil is more economical than a bare tube coil.

"The effectiveness of the finned surface decreases as the thickness decreases. A .010 inch fin, for example, may be 25% less efficient than .022 inch thick fin.

"The effectiveness of finned surface decreases with its length. A fin which is twice as long has less effectiveness than one which is shorter, or when the tube centers are closer together (if it is a continuous fin).

EFFECT OF MATERIAL

"The effectiveness of fin surface also depends upon the conductivity of the material used. Copper, according to Pender's Handbook, has a conductivity of .914. Aluminum has a conductivity of .344. According to Marks' Handbook, in terms of other units, copper has a conductivity of 220, and aluminum 119.

"Copper has from two to three times the conductivity of aluminum. In order to make the effectiveness of an aluminum fin equal to that of copper it would have to be approximately twice the thickness.

"The effectiveness of fin surface decreases as the air velocity increases. In force-draft unit coolers, the effectiveness of the fin surface would be less than in non-frost applications where natural convection occurs.

"The tube spacing in different types of coils varies from 1½ inches to 4 inches. From one fin per inch to five fins per inch is common practice."

Refrigeration service engineers, said Mr. Askin, are not so much concerned about the engineering features of one type as compared to another type as they are to which type will be the most economical to use from any one manufacturer.

Mr. Askin previously mentioned some of the functions which determined the effectiveness of finned surface. He continued by pointing out several features which affect the "K" factor of the coil as follows:

"1. The K factor of a coil increases as the fin spacing becomes wider, or the fins per inch become less.

"2. The K factor of the coil increases as the coil becomes shallower or thinner in the direction of airflow.

"Coil costs are greatest for bare tube coils and least for coils having a very close fin spacing, or coils having a large number of fins per inch.

"A group of coils was studied to determine which would be the most economical to use or which would give the greatest number of B.t.u. per dollar. Each of the coils tested was 18 inches wide by 80 inches finned length. The fin spacing tested included bare tube coils, coils having 1, 2, 2.66, and 4 fins per inch."

"The computation of B.t.u. per hour is based upon a cooler temperature of 38° F. and a refrigerant temperature of 13° F., or 25° F. temperature difference.

"In previous literature it has been shown that the K factor becomes greater as the number of rows of tubing in the direction of airflow becomes fewer. The comparison between one and two-row Fed-R-Fin coils indicates that it is possible to get 37% more for a dollar out of a one-row coil than out of a two-row coil."

Space requirements in some applications, explained Mr. Askin, make it necessary to manufacture coils more than one row deep, although it is known that a sacrifice in efficiency is made.

More Banquet Pictures from Chicago Conventions

We couldn't cram all the good pictures that were taken during the various banquets of the conventions of the service engineers and the parts manufacturers and jobbers during the first week of November in Chicago in the last issue, so we're publishing these holdovers now.

(1) Left to right around the table are W. C. Dever, Margaret Blanchard, Marjorie Campbell, R. H. Israel, and Robert Le Baron, all of the Virginia Smelting Co.; Mrs. Austin Jones, who manages the United Supply Co., Omaha jobber of refrigeration parts and supplies. Her husband, Austin Jones, who represents a number of manufacturers in a Central West territory, is the camera enthusiast who took these good pictures and most of the ones published in last week's issue.

(2) The first man to the left wearing glasses is E. J. Zoll of Chicago-Wilcox Mfg. Co.; then H. L. Beekly of Electrimatic Corp.; L. J. Pitcher of Electrimatic (busy with the relishes); and R. B. Anthony, Chicago-Wilcox Mfg. Co.

(3) Nathan Baraban, Copeland distributor in Kansas City; W. G. von Meyer, vice president of Copeland Refrigeration Corp.; S. Sack, Perry Metal Products, Inc., Brooklyn parts jobber; M. Davis, Indiana Harbor Belt railroad.

AIR CONDITIONED TO A T

THAT MEANS TONIC!

Air as bracing and snappy as that of famed Tucson! That's what the public wants from air conditioning.

Humidity, as air conditioning men know, is a key factor in such ideal atmospheres. Activated Alumina *adsorbs* moisture from air, gives a positive means of reducing humidity in air conditioning systems. Systems which use it deliver dry air, free from the "clamminess" and "shock" often found objectionable in air which has been cooled without adequate humidity control.

This development will undoubtedly influence the design of systems for economical comfort conditioning of the home, as well as industrial installations for reducing humidity. Our engineers will be glad to discuss the application with you. Send for the new free booklet, *Activated Alumina, Its Properties and Uses*. Address: ALUMINUM ORE COMPANY. *Sales Agent:* ALUMINUM COMPANY OF AMERICA, Pittsburgh, Pennsylvania.

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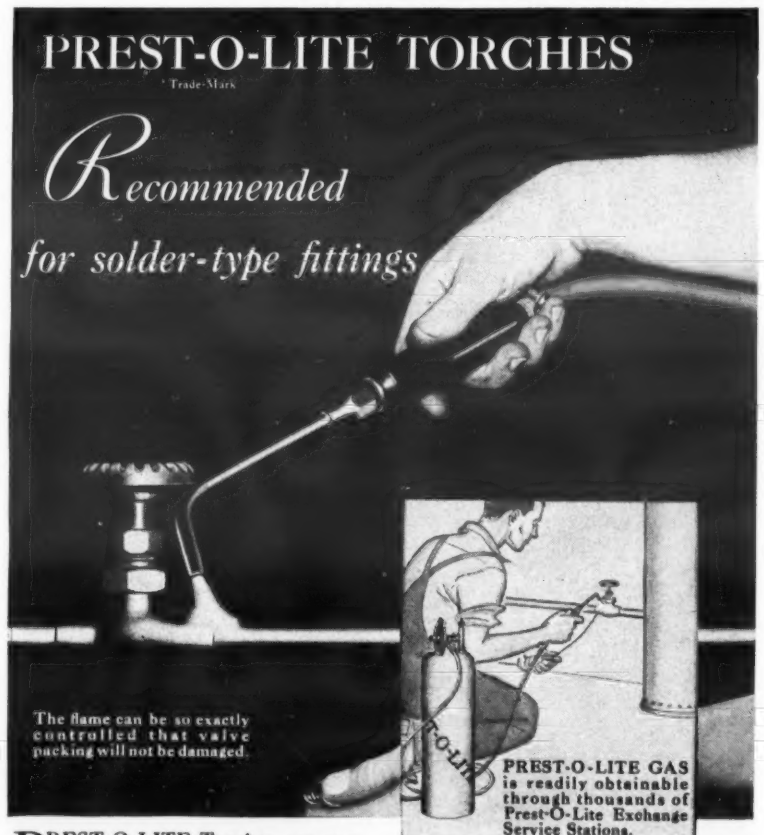
ACTIVATED ALUMINA

FOR REDUCING HUMIDITY

PREST-O-LITE TORCHES

Trade-Mark

Recommended for solder-type fittings


The flame can be so exactly controlled that valve packing will not be damaged.
PREST-O-LITE GAS is readily obtainable through thousands of Prest-O-Lite Exchange Service Stations.

PREST-O-LITE Torches are recommended by manufacturers of copper fittings for speedy, trouble-free installations. These torches provide a concentrated flame which can be directed evenly over solder-type fittings, assuring a thorough spread of solder without overheating any part of the fitting. Let your jobber show you how Prest-O-Lite Torches enable you to install solder-type fittings efficiently and profitably.

Prest-O-Lite A-6107 Torch . . $2.50

THE LINDE AIR PRODUCTS CO.
Unit of Union Carbide and Carbon Corporation
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In Canada:
Dominion Oxygen Company, Limited, Toronto

UCC

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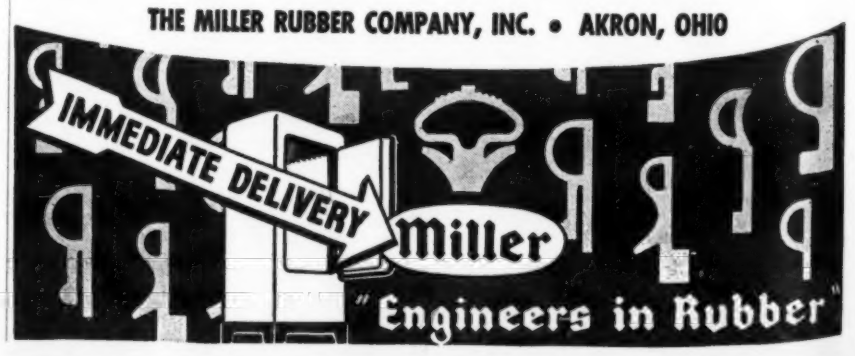
ON THIS NEW REPLACEMENT MARKET

• Door gaskets offer a vast replacement market which is growing every month. Why not cash in on this opportunity by being one of the first to offer this much-needed service?

It's plus business that is easy to get. Easy to handle, too, if you rely on Miller. You can service 80% of all refrigerators made to date from the Miller condensed line of 20 gasket types. Special type gaskets are also available, if needed.

Every owner of a refrigerator 5 years or more old is a prospect for this service. Supply it and add to your profit. Send for illustrated price list. Call your local jobber, or if he cannot supply you, write direct.

THE MILLER RUBBER COMPANY, INC. • AKRON, OHIO



AIR CONDITIONING

Drafty Feeling May Be Caused by Personal Characteristics and Not the Air-Conditioning System

PHILADELPHIA — Troubled by drafts? If you are, don't be too quick to blame the open window or the air-conditioning system, Prof. C. P. Yaglou of the department of industrial hygiene of the Harvard School of Public Health told members of the local chapter of American Society of Heating & Ventilating Engineers Nov. 11 in a talk on "Comfort, Health, and Therapeutic Aspects of Air Conditioning.

"Scientific research," said Prof. Yaglou, who is well-known for his research work on human comfort, "is disclosing evidence that drafts are not always caused by faulty air conditions, but that complaints may be due to an inherent instability of the heat-regulating system of the body, particularly the poor blood circulation to the extremities and deficient vasomotor response in sensitive individuals. Such individuals," Prof. Yaglou continued, "suffer considerably on exposure to air conditions that are perfectly comfortable to the majority of normal persons."

Citing research on drafts being conducted at the laboratory of the A.S.H.V.E. and in several colleges and medical schools, Prof. Yaglou asserted that these investigations represented a new trend in air-conditioning research which is providing engineers with a better understanding of the effect of air conditioning on the human body and would lead to important improvements in air-conditioning practices.

"As to cooling in hot weather, this unquestionably contributes much to the comfort and health of man and *under* certain conditions is an important factor in the course and prognosis of disease. There is much good evidence to show that cooling under adverse conditions of heat and muscular effort should prove beneficial to both employer and employe by increasing the output, decreasing illness and accidents, and lessening fatigue. The improvement derived is in direct proportion to external heat and muscular effort.

"Much research is now in progress for determining the optimum air conditions indoors during summer heat waves. All workers agree that temperature contrasts must not be too great. An indoor temperature even 10 to 15° below the prevailing outside temperature as is now the practice in warm weather, appears to be objectionable and harmful to some persons.

"The solution of the problem appears to lie in dehydrating the air to a comparatively low humidity, without reducing the temperature more than a few degrees below the prevailing outdoor temperature. In this way, temperature contrasts are moderated upon entering and leaving the conditioned space, and there seem to be no untoward symptoms in the transitional period of readjustment. How successful such methods may prove, remains to be seen.

"Aside from comfort and health," Prof. Yaglou continued, "air conditioning is proving to be a valuable adjunct in the treatment of disease. In operating rooms conditioned air is gradually becoming indispensable in reducing the risk of explosion of anesthetic gases and safeguarding the patient, surgeon and operating personnel against excessive summer heat. Of particular significance to operating rooms and contagious wards is the recent use of ultraviolet light for sterilizing air.

"In premature nurseries of institutions the maintenance of a suitable temperature, according to individual requirements, with a relative humidity of about 65% as determined by extensive research, results in a great reduction in the incidence of respiratory and gastro-intestinal diseases and a consequent improvement in the infants' chances for life.

"Hay fever and pollen asthma offer a wide field for application of air conditioning in the home, office or clinic; the main objective being adequate filtration of air. Unlike specific desensitization, treatment by conditioned air is not curative but gives only temporary relief.

"Cooling in warm weather is of great value in the treatment of fevers in enteric disorders, heat stroke, heart failure, and a variety of other ailments that often accompany summer heat waves. Considerable research is now in progress on a wide variety of diseases in which air conditioning may prove of value."

Carrier System Installed In Atlantic City Club

ATLANTIC CITY, N. J.—A Carrier air-conditioning system composed of a weathermaker and an evaporative condenser has been installed in Babette's, local night club on the boardwalk.

The system controls humidity and temperature at all times, and the duct arrangement is designed to conform with the nautical style of the club.

Explosive Ted Healy Gets Cooled Down

Comedian Ted Healy of Warner Bros. "Hollywood Hotel" cast offers his reaction to the new portable air-cooling unit wheeled onto the vast sound stage during filming of the picture.

* * *

Portable 16-Ton Delco-Frigidaire Conditioner Used to Cool Warner Bros. Studios

BURBANK, Calif.—Designed to lower temperatures on sound stages and thus relieve motion picture actors from the combined effects of natural and artificial heat under which they work, a portable 16-ton Delco-Frigidaire air-cooling unit has been constructed for Warner Bros. studios here.

The unit is installed in a large trailer body with airplane-type wheels, and is moved to different stages by a truck. Delco-Frigidaire engineers constructed the air cooler from studio specifications, using commercial refrigerating equipment, and made it capable of producing cold air at the rate of 100 tons of ice per hour.

Usually started at 6 a.m. on "shooting" days, the air cooler reduces stage temperatures to 68° by the time work begins at 7:30 a.m., when the high-powered lights on the stage are turned on, sending the temperature up to a comfortable 74°.

Fox to Exhibit Sunbeam Line At International Show

NEW YORK CITY—Varied selection of equipment representative of Sunbeam coal, oil, and gas-fired air-conditioning units will be exhibited by Fox Furnace Co., of Elyria, Ohio, at the International Heating and Ventilating Exposition to be staged in Grand Central Palace here Jan. 24-28.

A special duct installation equipped with "zone control" is being built by the Fox company for the exhibit. This installation consists of a Sunbeam winter air conditioner and a cooling unit connected with a complete duct and register system, and is designed to show how the system actually operates in a home. Four thermostats, each representing a different "zone" in the home, control the system.

7 Comfort Installations Made in Chicago In October

CHICAGO—Seven air-conditioning installations, two of which were room coolers, were made in Chicago during the month of October.

A 5-ton, 7½-hp. room cooler was installed in the Adam Griesel & Son funeral home, and a ½-ton, ½-hp. unit was installed in the private office of Whitman & Farnes.

A list of the five central system installations follows: Walter E. Johnson candy factory—0 tons, 18 hp.; C. E. Auditorium—65 tons, 88 hp.; Litt jewelry store—15 tons, 18½ hp.; Marks jewelry store—10 tons, 12 hp.; Geo. Stafford photographic studio—3 tons, 3½ hp. This last job was an addition to a previous system.

'What's Inside' Unit Shown By G-E Dealer's Display

DAVENPORT, Iowa—The question of what's inside General Electric's gas-fired warm air conditioner was answered in a window display set up by Tri-City Electric Co., G. E. air-conditioning distributor here.

Center of attraction in this display was one of the G-E units, from which the front had been removed so that the mechanism would be visible to passers-by. Paper streamers connected vital parts of the unit with identifying placards.

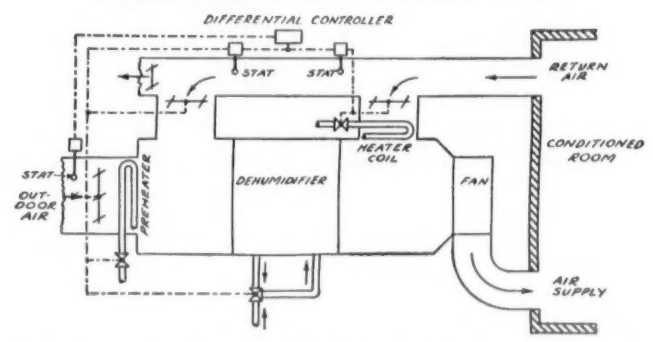
New Spray-Type Unit Introduced by York

YORK, Pa.—York Ice Machinery Corp. has introduced a new spray type air conditioner for industrial applications of low temperature air-conditioning.

Largest unit of this type ever built by York, the conditioner is designed to handle air volumes up to 16,000 c.f.m. and capacities up to 40 tons of refrigeration.

Front, back, or top discharge outlets can be provided, and spray water heaters and air reheat coils are available for various installation requirements. New unit supplements York's standard line of spray type conditioners adaptable for applications requiring constant temperature and relative humidity.

DEGREE OF AIR CONDITIONING CONTROLLED (WITHIN COMFORT LIMITS) BY CONDITION OF OUTSIDE AIR



THIS System (*) of control is ideal for both summer and winter operation. Within predetermined limits the condition of the air supplied to the room rises and falls with the condition of the outside air. After fixed maximum or minimum points are reached the condition of air remains static under further rise or fall of outdoor air. Maximum conditions of comfort are possible due to the quick and discriminating control. Marked economy due to discrimination between outside and indoor air for conditioning is a feature.

This air conditioning control system while somewhat more costly than an ordinary system pays big dividends in comfort.

Special care and engineering skill are necessary in the installation of this system and we suggest you consult a competent engineer or our licensees.

Our licensees may install this or any other Auditorium Conditioning Corporation System or grant permission to you, your engineer or architect, or contractor, to do so.

LICENSEES

American Blower Corp. Detroit, Mich.
Buffalo Forge Co. Buffalo, N. Y.
Carrier Corp. Syracuse, N. Y.
Frick Co. Waynesboro, Pa.
General Electric Co. Schenectady, N. Y.
J. O. Ross Engineering Co. New York, N. Y.
The Cooling & Air Conditioning Corp. *Division of B. F. Sturtevant Co.* Hyde Park, Boston, Mass.
Westinghouse Electric & Manufacturing Company East Pittsburgh, Pa.
York Ice Machinery Corp. York, Pa.

(*) Auditorium Air Conditioning Systems are covered by many issued patents and pending applications.

AUDITORIUM CONDITIONING CORPORATION
New York Office — 17 EAST 42nd STREET

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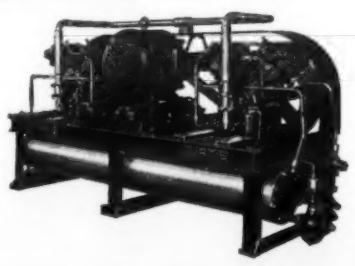
No. 1 of a Series of Curtis Advanced Engineering Features.

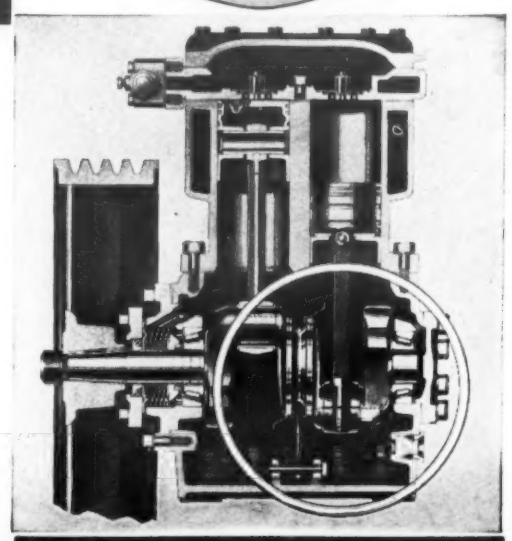
Tapered Roller TIMKEN BEARING EQUIPPED

TIMKEN TAPERED ROLLER MAIN BEARINGS

Increase efficiency — thermal and mechanical due to less friction.
Take end thrust due to crankcase and seal spring pressure.
Insure longer life.
Provide for adjustment when needed (at such time plain bearings need replacement).

Yes, they are more expensive (but not to you). This is just one example of the engineering originality and extra value incorporated in Curtis Condensing Units that contributes so much to their dependable, carefree performance.





CURTIS
"Builders of Condensing Units Since 1922"

CURTIS REFRIGERATING MACHINE CO.
Division of Curtis Manufacturing Co.
1912 KIENLEN AVENUE ST. LOUIS, MO.

Represented in Canada by
Canadian Curtis Refrigeration Co., Ltd.
20 George St., Hamilton, Ont., Can.

St. Louis Dealers Agree to Abolish 'No Down Payment' and Shorten Terms on Electric Appliances

(Concluded from Page 1, Column 3)

Laclede Gas Light Co.; St. Louis County Gas Co.; Famous-Barr Co.; Scruggs, Vandervoort & Barney; Stix, Baer & Fuller Co.; Sears, Roebuck & Co.; Lammert's Union; May Stern; Hellrung & Grimm; and Arthur R. Lindburg, Inc.

Terms of the new agreement are:

Refrigerators and Electric Ranges

Minimum down payment on bills up to $150—$5 (24 months).

Minimum down payment on bills of $150 to $200—$10 (24 months).

Minimum down payment of 10%—30 months to pay.

Minimum monthly payment—$5.

Minimum **advertised** monthly payment—$5.

Gas Stoves, and Ranges and Gas Heaters

Down payment of 5%—24 months to pay.

Down payment of 10%—30 months to pay.

Minimum **advertised** monthly payment—$4.

Radios

Up to $60—down payment 5% (minimum $3); minimum monthly payment $4.

Over $60—down payment 5% (minimum $5); minimum monthly payment $5.

Maximum length of contract—24 months.

Maximum **advertised** length of contract—18 months.

Washers and Ironers

Minimum down payment of 5%—18 months to pay.

Minimum down payment of 10%—24 months to pay.

Minimum **advertised** monthly payment—$4.

Trade-ins

Trade-in allowance not to be applied on down payment in any case.

Advertising

General rules in connection with terms schedule:

1. Stores will in no way advertise "No down payment" or "No money down."

2. No advertising of any kind of terms longer than the schedule.

3. No sales to be made without required down payment.

Electrolux to Present 1938 Refrigerator In 4 Key Cities

EVANSVILLE, Ind.—At the request of dealers who attended the annual sales conference of Servel, Inc., at French Lick, Ind., last month, presentation of the 1938 Electrolux refrigerator will be repeated in four key cities in various parts of the country, with a possibility of additional showings.

Fifteen Servel officials left Evansville Nov. 9 for Los Angeles, where the first showing was made Nov. 16. The schedule provides for additional showings at Dallas on Nov. 20; Kansas City, Mo., on Nov. 23; and Chicago on Nov. 29.

George S. Jones Jr., vice president and general sales manager, is in charge of the tour.

Speakers will include George L. Roach, assistant to the president; C. A. Miller, regional sales manager, Oakland, Calif.; R. C. Bon Seigneur, regional manager, Omaha; R. R. Guenther, assistant regional manager, Columbus, Ohio; William Reynolds, advertising manager, New York City; H. S. Boyle, sales promotion manager, Evansville; Miss Jane Tiffany Wagner, home service director, New York City, and P. B. Wiske and Carl Conkey. Others in the party are F. G. Schlengel, Clarence Spiegel, Tom Glass, Robert Moore, John Surbeck, and Len Walters.

Increased Purchasing Power & Improved Business Conditions Will Help Sales Of Appliances, Allen Believes

NEW YORK CITY — Increased individual purchasing power and continued favorable general business conditions, strengthened by a new "calendar year" for the industry, are two important reasons why 1938 will be another good year for the electric refrigeration industry, A. E. Allen, Westinghouse vice president, told utility and department store executives previewing the 1938 Westinghouse line here recently in the Waldorf-Astoria hotel.

"As long as the manufacturer and its distributing organization keep faith with the consuming public by increasing the efficiency, convenience, and design of its product, we will continue to have prosperity in the electric refrigeration industry," he said.

PUBLIC ACCEPTANCE

"Since the electric refrigerator has become a convenience-necessity, if I may coin the term, its acceptance by the public has been wholehearted and unqualified. Continued prosperity depends on our ability to meet the challenge of progress, which, fortunately in the past we have been able to do," the Westinghouse merchandising chief explained.

"The electric refrigeration industry has profited, as have other businesses, by increasing purchasing power. However, since the electric refrigerator had its most rapid growth in the leaner years, its growth has not been so dependent on general business conditions as has been the majority of the industries. The interesting point, or indication, is that in spite of the relatively high saturation of the market, sales of electric refrigerators continue to mount; and that, as the mythical saturation point is reached, the sales actually increase.

INCOME FIGURES

"It is significant that the national income produced and national income paid out has increased materially in the past three years," Mr. Allen continued. "The national income produced increased from a total of 55 billion dollars in 1935 to 63.8 billion dollars in 1936, continuing the upward trend for the fourth consecutive year. This nine billion dollar gain, or 16%, was the largest for any year of the recovery period.

"The aggregate income payments to individuals or to associations of individuals for services increased from 54.6 billion dollars in 1935 to 62.1 billion dollars in 1936, a gain of some 14%. Here again the 1936 increase was the largest of the recovery period for incomes produced. From the 1933 period the paid-out income rose more than 17 billion dollars, or approximately 40%. These income increases have been one of the most important contributing factors to the continued growth of the electric refrigeration industry.

450,000 NEW HOMES

"Hand-in-hand with this increased purchasing power has been the building market, another source of refrigeration sales. Statistics indicate there will be 450,000 new homes built in this country and building authorities tell us there is an acute shortage of homes, so we can anticipate a building program for a number of years. It is difficult to imagine that these modern new homes will not be equipped with electric refrigerators.

"Add to the new homes the fact that during this year there will be approximately a million and a half marriages, creating some half million new homes. The large majority of these newly created homes will demand electric refrigeration."

In addition to the lucrative market still existing, Mr. Allen indicated that the replacement market is beginning to take form. He estimated in 1937 from 10 to 12½% of the sales will replace old refrigerators, and that in the coming years the replacement market will be a valuable one. He added that the sale of electric refrigerators for replacements alone would be larger in 1937 than the combined total sales of the industry in 1926.

"The adoption of a new calendar year for the electric refrigeration industry, put into effect for the first time this year, will be instrumental in increased sales," stated the Westinghouse executive. He said that as a result of its adoption Westinghouse had the greatest October sales records in the history of its electric refrigeration department. The sales, advertising, manufacturing and distribution activities will all be planned on the basis as from November to November, instead of from January to January, as has been the practice in the past.

FOLLOW AUTO INDUSTRY

"We have taken a leaf from the pages of successful selling experience by the automobile industry, since the electric refrigeration business parallels theirs to a large degree," Mr. Allen explained. "By adopting the November-to-November year we will have not only an increased holiday activity, but a leveling off of the peaks and valleys for the remainder of the year.

"Every agency concerned in the manufacturing, selling, or distributing of electric refrigerators will benefit and profit materially by this change. Production schedules can be leveled out decreasing the off-season layoffs; distributors and dealers can maintain an even stock and need less warehousing facility; and the salesmen's income is considerably more regular than it has ever been. I believe the adoption of the new fiscal year is one of the most forward steps the industry has yet taken."

PREDICTS 1938 SALES

Mr. Allen predicted the industry would sell from 2,250,000 to 2,500,000 units in 1938, as the result of the increased promotions and aggressive methods of merchandising common to the industry. He stated that the industry would sell approximately two and a half million units this year, with an estimated retail value of $400,000,000.

R. C. Cosgrove, manager of household refrigeration sales, who reviewed the company's activities for the past year and introduced the new 1938 models to the group, said that the new models will be backed with the most comprehensive advertising and promotional programs yet sponsored by Westinghouse.

ADVERTISING PLANS

Larger advertising schedules in newspapers and national magazines will form the backbone of the 1938 program, with "Kitchen Proving" activity supplementing the advertising, he declared. New features introduced in the 1938 models resulted from the Kitchen-Proved activity, since they were taken from suggestions made by the Kitchen-Proving hostesses, he revealed.

In introducing the 1938 Westinghouse line, Mr. Cosgrove cited a few interesting results of the far-flung Kitchen-Proved activity. He stated that for the average sized refrigerator of 6.1 cu. ft., in an average sized family of 4.1 persons, the average running time for the mechanism proved to be approximately two hours out of every 12, depending on geographical location.

Door openings were averaged at 46.4 times daily, with the kitchen temperature at 75.6°, and an average temperature of 40.2° in the milk compartment and 42.5° in the food compartment.

Monthly savings in dollars and cents brought to light by these proving kitchens show savings of $9.10 a month on food alone. The saving over previous refrigeration methods averaged 62 cents a month.

Inland Division Celebrates 15th Anniversary

DAYTON—Inland Mfg. division of General Motors Corp., manufacturer of rubber ice trays for electric refrigerators, is observing its fifteenth anniversary, having been established in this city in October, 1922.

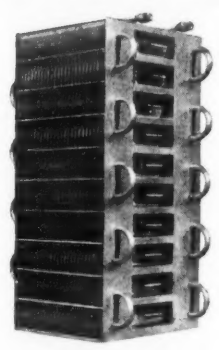
The plant started with 225 employes; in 1937, the employment figure reached 3,350. Original floor space was 50,706 sq. ft.; in 1937, it reached 664,551 sq. ft.

Starting with 16 different products in 1923, in 1937 the plant was producing 425 different products.

THE BUYER'S GUIDE

THE MODERN INSTALLATION FOR REACH-IN COOLERS

"RIFLED" FIN COILS • • •
ALUMINUM TRAYS-SHELVES • • •
DESSERT COMPARTMENT OPTIONAL • • •



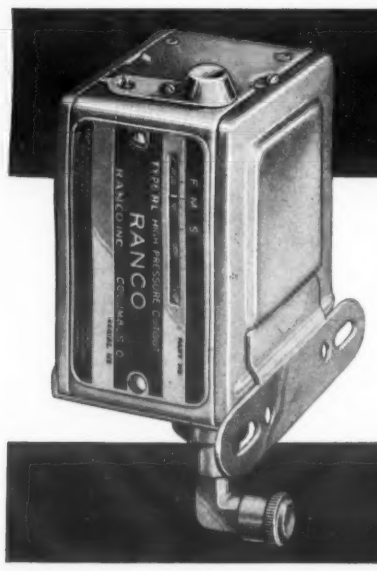
Model 10F1

Peerless Finned Ice Cube Maker

Cause:
Box Cooling PLUS Ice Cubes
Effect:
A continually increasing number of reach-in, delicatessen and grocery boxes are being equipped with PEERLESS FINNED ICE CUBE MAKERS.
Peerless provides you with a selection of 157 different sizes of Finned Ice Cube Makers—enough to meet every requirement of your customer.
And mark this well: There is a big demand for these units that furnish both refrigeration and ice cubes.
Don't miss this sales opportunity that is a "natural".

PEERLESS of AMERICA, Inc.
ESTABLISHED IN 1912 AS THE PEERLESS ICE MACHINE CO.
Main Factory—General Offices
New York Factory 43-20 34th Street Long Island City
515 West 35th Street Chicago
Pacific Coast Factory 3000 S. Main Street Los Angeles
PEERLESS JOBBERS IN ALL PRINCIPAL CITIES

BUY PEERLESS FOR PERFORMANCE



One Control
For All Three Gases
No High Pressure Gauge Needed

SULPHUR Dioxide, Methyl Chloride, Freon—this quality-built commercial control handles **all three gases.** No bother. May be set properly on the job without use of high pressure gauge. Range calibrated for all three gases. A precision control—and a money-maker for you.
Send for bulletin. For complete export information, write

RANCO, Inc., Columbus, Ohio, U.S.A.

RANGE CALIBRATIONS

Letter	Cut Out Pressure	Refrigerant
S	135 lbs.	SO_2
M	175 lbs.	CH_3Cl
F	190 lbs.	F-12

Visual Range Adjustment

Ranco TYPE RLH-850 COMMERCIAL CONTROL

PELCO *Buyers* ARE YOUR SALESMEN

Operators of taverns, restaurants, roadhouses, resorts, hotels—wherever bottled beverages and food are sold—become YOUR salesmen the minute they buy a PELCO.

The DOUBLE UTILITY feature (the beverage cooling compartment where FLOATING ICE is made AUTOMATICALLY, as needed, plus the efficient dry-cold compartment), the revolutionary performance, the rich appearance make fast friends for PELCO.

GET the facts on PELCO now . . . Address Desk A-117

MANUFACTURED BY *Refrigerator Division*

Model 180 BEVERAGE COOLER

PORTABLE ELEVATOR MFG. CO.

Sold in Canada by UNIVERSAL COOLER CO. OF CANADA, LTD., BRANTFORD, ONTARIO BLOOMINGTON ILLINOIS, U. S. A.

MAJOR APPLIANCES

Salesmen Learn to Iron Shirts

Salesmen of the Gould-Farmer Co., Syracuse distributor for General Electric appliances, engage in a concentrated two-hour practice workout with a flatplate ironer under the tutelage of Mabel Ely, home economist.

* * *

G-E Salesmen Learn How to Iron & Sell Ironers

SYRACUSE, N. Y.—Wrinkles were ironed out of shirts and sales methods simultaneously when salesmen of Gould-Farmer Co., General Electric distributor in this area, recently engaged in a two-hour practice workout with the G-E flatplate ironer under the supervision of Mabel Ely, home economist.

Purpose of the practice session was to familiarize salesmen with the actual operation of the ironers, on the principle that theory must be mixed with practice to form successful salesmanship.

Among those participating in this ironing instruction were: J. A. Luce, manager of the Binghamton division; N. Lawrence, Fred Plank, and E. D. Ayres, wholesale representatives; E. M. Farmer; A. G. Elliott, manager of the Rochester division; Pat Rafferty, manager of the Syracuse division; Bob Beehler, G-E district specialist; and Miss Ely.

50,207 Domestic Coal Stokers Sold in First 8 Months

DETROIT—During the first eight months of this year 50,207 domestic coal stokers were marketed, a 57.01% increase over the 31,977 units sold during the same period of 1936 and a 208.07% increase over domestic stoker sales during the first eight months of 1935, according to E. L. Sylvester, sales manager of the automatic heating department of Kelvinator division, Nash-Kelvinator Corp.

August sales this year were 46.45% above sales in August, 1936, and 150.46% over sales during August, 1935. August sales of domestic stokers this year totaled 12,350, compared to 8,433 for August, 1936.

Premium Offers to Aid Crosley Home Laundry Equipment Sales

CINCINNATI—Floodlamps, folding chairs, and laundry tubs are being offered as free premiums to purchasers of Crosley washers and ironers in the most recent promotional campaign launched by Crosley Radio Corp. to stimulate sales of its home laundry equipment.

The lamp, a streamlined device which fastens to the washer, is offered with any model washer. The chair, given free with each purchase of a Crosley Savamaid ironer to emphasize the ease and comfort of ironing while seated, is upholstered and provided with a steel folding mechanism.

Duplex laundry tubs valued at $9.95 are offered free to every purchaser of any electric or gas-engine model of Crosley's "White Line" of Savamaid washers. The tubs are designed to facilitate rinsing and bluing operations.

Apex Markets Vacuum Cleaner Ensemble

CLEVELAND — Apex Rotarex Corp., Cleveland appliance manufacturer, has introduced a new vacuum cleaner ensemble which consists of the Apex floor cleaner and the Apex hand cleaner.

The ensemble is scheduled to retail at $39.95 complete. General promotion for the combination offer includes newspaper ads and window displays.

The floor cleaner has a cast aluminum nozzle with grey crinkle finish. It is provided with a specially shaped handle, a toggle switch, Pres-toe nozzle adjuster and height indicator, rubber bumper, Apex forward rotating brush, ⅛-hp. Apex motor (a.c. or d.c. current), and an 18-ft. moisture-proof cord with rubber plug.

Construction and finish of the hand cleaner is similar to that of the floor cleaner, but it weighs only 5½ lbs.

Dealer Who Sold 100 Ranges Last Year Says Sales Opportunities Are Good Since Electric Cookery Story Is Still Novel

FLORENCE, Ala.—The electric range has barged into the front rank of popularity among major appliances with Hauerwas Electric Co. here. The company sold more than 100 ranges last year, and also went 200% above quota in the sale of water heaters, another up-and-coming appliance. Sales for 1937 are running even better.

"Women want electric ranges; first, because they hold out the attraction of a cool kitchen and clean cooking, and secondly, because of the pride of ownership associated with them," adds Mr. Hauerwas. "A cool kitchen the year around is the biggest selling point, so we bear down on this. We show a customer that we can cook an oven meal without even moving a vase of flowers from the top of the range.

USE TESTIMONIALS

"In order to circumvent the idea that electric cookery may be 'too expensive,' we have obtained testimonials from a number of our customers, together with copies of their light bills. These bills run from $3.50 to $6.50 per month, some including a number of other electrical appliances.

"We estimate that it takes a half ton of coal valued at $3.50 to operate a coal stove, and about $3 worth of wood for a wood stove; so our argument is that an electric range, if anything, is cheaper to operate, not to mention the added cleanliness, coolness, and note of distinction it adds to the kitchen."

ADD INSTALLATION COST

Like other dealers in the city, Mr. Hauerwas finds it best to include the cost of the range installation in the price of the appliance itself. This eliminates the necessity of having to make two sales. No effort is made to add a profit to the cost of the installation, which runs $20 to $22 in actual labor and material. The dealer is satisfied with the profit on the merchandise alone. The installation cost, however, is used as a lever to trade customers up on the plea that part of the installing cost may then be absorbed by the house.

NOT MUCH COMPETITION

"As the electric range and water heater grow in popularity we see a definite advantage of handling only one line, especially where it is exclusive in the city," says Mr. Hauerwas.

"Persons who bought our make of refrigerators or radios and like them are now coming to us for the additional appliances. Maybe we sold the original appliance in the home; maybe the purchase was made in some other city. A dealer, by building up one manufacturer's product in a territory, is building repeat business for himself. That is the way it has worked out for us.

UTILITY COOPERATION

"Competition has not reached the point in electric ranges that it has in refrigerators. People are still willing to listen to the story of electric cookery itself, rather than mere argument over mechanical features.

"As customers take to ranges and water heaters they are also coming around to the all-electric kitchen idea. We have a planned kitchen set up in our store, and we have equipped several kitchens completely, including the built-in cabinets."

To dealers offering electric ranges for sale, Mr. Hauerwas stresses the value of having a mass display of ranges—a dozen or more, not just one or two.

Right now the utilities are offering fine cooperation with the dealers in the sale of ranges and water heaters, since they are good load-builders. Mr. Hauerwas takes advantage of all sales helps, and has won one prize in a state-wide contest sponsored by a power company.

After customers buy ranges from him, Mr. Hauerwas approaches them on the sale of utensils suitable for use with the new appliance. He points out that for surface cooking, pans should have flat bottoms, straight sides, close-fitting covers and be large enough to cover the heating unit. For the oven he recommends shallow, uncovered pans for meat, covered pans or baking dishes for vegetables, and baking sheets for biscuits or cookies.

"For quite a while, the electric range was considered by most people as a luxury, beyond their reach," explains Mr. Hauerwas. "This is no longer true. The range is now in the class with the refrigerator, radio, automobile, or telephone—a mighty nice thing to have; almost a necessity."

Hendon Named Head Of Nema Section

CHICAGO — Claude J. Hendon, manager of the heating device sales section of the General Electric appliance and merchandise department, Bridgeport, Conn., was elected chairman of the domestic appliance section of the National Electrical Manufacturers Association at its recent meeting here.

He joined Edison General Electric Appliance Co. in 1927 as range specialist in the Atlanta district. He was then appointed district representative in Atlanta of the G-E merchandise department, and in 1932 became district appliance sales manager. He became manager of G-E heating devices in 1934.

THE BUYER'S GUIDE

A COMPLETE LINE OF WATER COOLERS

Whatever the conditions—in factory, office or reception room—there is a Cordley Cooler to fit the job. Bottle or pressure types, in varying capacities, with faucet, bubbler, or glass filler, these coolers are substantial, sturdy, attractive units which you can be proud to sell.

Many prominent firms have adopted them: Sears Roebuck, American Optical, Walter Baker Chocolate, Remington Rand, Pacific Mills, Otis Elevator, Sweet Orr Overall. CORDLEY & HAYES, 141 Hudson Street, New York City.

CORDLEY ELECTRIC WATER COOLERS

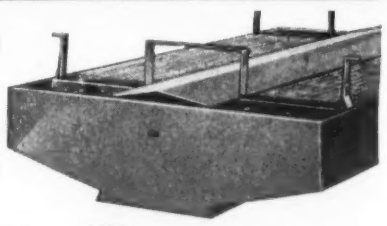
MILLS
COMPRESSORS
for Commercial Use
Mills Novelty Company • 4100 Fullerton Avenue • Chicago, Illinois

MARSH Refrigeration Instruments
Buy service—not service calls

The Marsh merkustat electrical cut-out has earned its reputation as the motor control that always works right. It is constructed with *bronze* bourdon tube for any pressure medium that will not corrode brass, and with *steel* bourdon tube for ammonia and carbon dioxide. When safety is at stake only the best equipment is good enough—and that means Marsh. Write for new catalog describing Marsh gauges, thermometers and recorders.

JAS. P. MARSH CORPORATION
2067 SOUTHPORT AVENUE, CHICAGO
WRITE FOR NEW CATALOG

You MUST have correct air circulation for correct cooling in a Walk-In Cooler. The Rempe AUTODRAFT is designed for positive circulation and maximum cooling. Write for interesting data.



Rempe COILS
340 N. Sacramento Blvd.
CHICAGO

Dayton V-Belts are the logical choice for all types of appliances, because they provide silent, dependable transmission—because their powerful grip prevents slippage—because they run smoothly without weaving, twisting or vibrating. A nearby distributor carries a complete stock.

THE DAYTON RUBBER MANUFACTURING CO.
DAYTON, OHIO
WORLD'S LARGEST MANUFACTURER OF V-BELTS

Dayton V-BELTS

AIR CONDITIONING AND REFRIGERATION

"KEEPING STEP WITH INDUSTRY"
That is the function of this reliable school that prepares men properly for the Air Conditioning and Refrigeration field.

A resident school that meets every requirement of the industry in its practical and technical training. Superbly equipped—9000 square feet of laboratories and classrooms. Day and Evening Courses. Request Booklet T.

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ASK FOR NEW BULLETIN 144C
"T" Series Thermo Valves
ALCO VALVE CO., Inc.
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For Sale
Wholesale Refrigeration Parts Supply Business
250,000 Pop.
Middlewest City
$5000.00 cash required.
BOX 989 NEWS

Pleasantaire Conditioner Used in Curtis Trailer

NEW YORK CITY—First automobile trailer to be equipped with a complete portable air-conditioning unit is being displayed at the automobile show here by Curtis Aerocar Co., Coral Gables, Fla.

The ⅓-ton, double-cylinder, compressor air-conditioning unit used in the Curtis Aerocar is manufactured by Pleasantaire Corp., whose President Richard F. Roper is the son of the U. S. Secretary of Commerce. The Pleasantaire Corp. recently moved to Washington, D. C., from New York City.

The Pleasantaire unit cools, dehumidifies, deodorizes, washes, and circulates more than 300 c.f.m. of air, and is said to be capable of conditioning any space up to 2,000 cu. ft. Price of the complete conditioning unit is $199.50.

Both the air conditioner and the trailer's electric refrigerator can be operated while the trailer is on the road by means of an 850-watt, 110-volt a.c. motor-driven generator installed in the trailer's power unit.

Among other facilities boasted by the Curtis Aerocar are: bottled gas tanks which supply fuel for the gas grate and the stove and hot water supply in the galley; a 200-watt, 6-volt, motor-driven generator; a 160-ampere hour storage battery; combination 6 and 110-volt lighting fixtures; 30-gal. water supply delivered to outlets under air pressure; radio; and telephone communication between the trailer and the car which pulls it.

THE BUYER'S GUIDE

New A.P. 44

Air Conditioned Model

OWN YOUR OWN BUSINESS IN 1938

THRU' THE H. & H. "38" PLAN

Are You a REAL Commercial Refrigeration or Fixture Salesman?
The H. & H. '38 Direct Dealer Plan Will Put You In Your Own Business.
MAKE LARGE DEALER PROFITS, (not small commissions)
Our '38 Plan Offers:—

1. Direct factory-to-dealer exclusive franchise—floor models—sales kits—descriptive literature THAT SELLS.
2. Complete line—Dulux and porcelain display cases, streamlined and conventional models—market coolers—grocery boxes. Over 50 different models and sizes—make regular dealer profits.
3. Free—forceful mail advertising—DIRECT TO EVERY PROSPECT IN YOUR TERRITORY.
4. To finance the H. & H. products and any nationally known compressor of your selection, both on the same contract with regular down payment and terms.
5. We discount your contracts—converting them into dollars—IMMEDIATE PROFITS TO YOU.

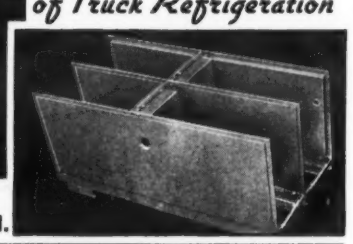
Valuable Territories Now Available—ACT NOW!
WRITE, WIRE COLLECT giving us all information; experience, sales ability and territory YOU NOW COVER.

HOLCOMB & HOKE MFG. CO.
1545 E. Van Buren St. Indianapolis, Indiana

KOLD-HOLD ICE CREAM CABINET CONVERSION UNITS

Modernize old equipment . . provide much greater storage space for packaged goods . . eliminate brine leaks and attendant odors . . reduce weight and simplify installation . . require a minimum of service . . provide ideal temperatures under all conditions . . cost less to operate . . quickly and easily installed in any standard cabinet at small cost.

As Outstandingly Superior as the **KOLD-HOLD** *System of Truck Refrigeration*



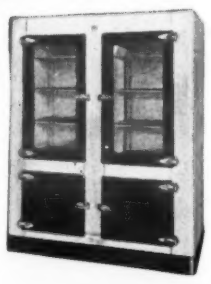
Write for Complete Facts
KOLD-HOLD MFG. CO. - LANSING, MICH.

TYLER WELDED STEEL REFRIGERATORS

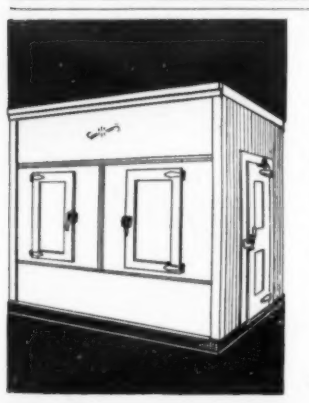
A COMPLETE NEW LINE FOR 1938

Fastest selling line ever offered to the trade. Completely covers the field. Pace-setting values in Top Display and Double Duty Cases—6, 8, 10 and 12 foot lengths . . . Two shelf cases . . . Delicatessen cases . . . Reach-In Boxes . . . Walk-In Coolers. All streamlined with striking modern beauty and engineered with latest improvements.

With this new Tyler line of commercial refrigerators you can step out ahead of all competition. Write today for free literature and attractive dealer proposition.



TYLER FIXTURE CORP. Dept. R, NILES, MICH.
NEW YORK OFFICE, 601 W. 26th St. CHICAGO OFFICE, 1063 W. Ogden Ave.



REACH FOR DOLLARS!!
Don't Pick Up Pennies

Dollars count—for over 40 years we have given the distributor a direct factory jobbing discount. A line of quality fixtures that sell on sight and a personal family service that makes selling a pleasure and puts $$$ DOLLARS $$$ in the cash drawer.

Your inquiry is invited.

BROMANN BROS.
857 Fulton St. Chicago, Illinois

AIR CONDITIONING

Characteristics of Well Water And Cost of Obtaining It Should Be Considered In Planning System

BY F. O. JORDAN

In their desire to obtain the benefits of air conditioning for themselves at a minimum of expense, the imagination of a great many hot weather-weary folks has lingered long upon the possibilities for cheap comfort obtained by cooling their environmental atmosphere by direct or indirect contact with cool well water.

Indeed, the purchase and operation of costly mechanical refrigeration equipment does appear to be a needless expense when such untold oceans of cool water await in the subterranean depths just below to give freely of their cool waters for our summer-time comfort, just for the asking, so to speak.

However, quick comfort from those nearby waters may sometimes be a groundless hope in just about the same degree that comfort may be lacking in the assurance to the mid-ocean cast-away that land is only a mile away—one mile straight down.

Some features which must be checked before you can safely pin your hopes of summer comfort on well water are:

Relation of Latent and Sensible Heat Loads

A. The relationship between the latent and sensible loads upon the particular project in question.

For the project of light occupancy such as the usual home or office, well water temperatures as high as 60° may be satisfactory. Higher water temperature cannot reduce dew-point temperature (hence the relative humidity) of the air as required for comfort.

Furthermore, higher water temperatures require the circulation of greater quantities of air in order to convey a given cooling effect (in B.t.u.), so that a point is reached where the required air circulation in cubic feet per minute per ton of refrigerating effect is so great that fan and duct sizes become excessive, and the conditioned space becomes drafty.

For the project of medium occupancy concentration, well water temperatures must be 55° F. or lower in order to maintain the required ratio of latent heat or moisture to sensible temperature reduction. If higher water temperatures are used, the ratio of latent to sensible capacity will be too low, so that excessive cooling work must be done in order to do the dehumidifying work required.

For the heavy occupancy project especially in the humid climate, well water temperatures must be 45 to 50° in order to obtain the required latent ratio. Higher water temperatures may result in a cool but damp and clammy condition, which may only be remedied by the use of open absorption or adsorption drying, or by expensive "back-heating" in which the excessive sensible cooling which is done while effecting the required moisture removal, is counteracted by back heating, or re-heating the air after it has passed through the air-conditioning coil.

Temperature of Well Water Available

B. The well water temperature available in the vicinity. This requirement is closely associated with requirement "A." Approximate well water temperatures may be determined from Fig. 1.

It is often necessary for the air-conditioning engineer to know the temperature of surface and well water available in various localities when specifying or designing condensers and cooling equipment. This information is presented in the accompanying chart (Fig. 1) from Water Supply Paper 520, published by the United States Geological Survey, Department of the Interior, Washington, D. C.

Fig. 1 shows the probable temperature of well water at depths of 20 feet to 60 feet in the United States. It has been found that, at depths of 30 feet and greater, the annual seasonal range of temperature of well water does not exceed 1°.

From a study of over 3,000 records of ground water temperatures, it has been concluded that under normal conditions, the temperature of ground water obtained at a depth of from 30 feet to 60 feet will generally exceed by 2° or 3° the mean annual air temperature for the locality, with exceptional cases slightly greater. The British Association for the Advancement of Science has adopted as most probable an average increase in temperature of 1° for each 64 feet of depth.

It may be stated that for practical purposes water taken from depths of 20 feet to 200 feet will have a uniform temperature of from 3 to 6° higher than the mean annual air temperature.

Characteristics of Well Water in Locality

C. Characteristics of well water available locally. In many localities, well water contains corrosive ingredients or malodorous gases which render it unfit for air-conditioning service.

Corrosive characteristics may result in ruined equipment within a short while, while malodorous gases may be so objectionable that authorities may not allow the waste water to be run into sewers, streams, etc. More than one well-water air-conditioning installation has been abandoned for this reason.

Sulphur is a common offender in well water. The sulphur odor may be found objectionable when the water is discharged into the city sewage system. If the theater is located in a residential section, this may become a very serious problem. Methods used for overcoming this difficulty are:

1. Dilute the discharged well water with a smaller quantity of fresh city water.

2. Keep the well water on the alkaline side in order to eliminate the chance for hydrogen sulphide being liberated. This may be done chemically with a tank of chemicals, and a reliable chemist should be consulted to determine what chemicals are necessary as shown from the analysis of the sample well water.

3. A sump into which the discharge water is pumped may be used. In some sections of the country this has become a requirement incorporated in the city ordinance, and all deep well water must be returned to the soil close to the source from which is it removed.

4. Aerating the water by pumping the discharge water to the roof of the theater or building may be resorted to for removing the sulphur odor before the water is dumped into the sewer.

Problem of Disposing of Used Water

D. Possibility of disposal.

After the water has served its purpose in air conditioning, it may become a serious liability. Ordinances are not uncommon prohibiting the wasting of such quantities of water to sewers, either because of danger of overloading sewers, or because of odors as mentioned above.

If no sewers, streams, or ditches are available, the waste may be run into a sump from which it is dissipated into the ground, or a well may be drilled through which the waste water may be returned for recooling to the water-bearing strata whence it came.

Cost of Drilling Well To Supply Water

E. Cost of Drilling. In certain localities well drilling costs are excessive, either due to rock formations, or to depths at which suitable water exists. In some localities the "striking" of well water may be practically impossible, or wells which are satisfactory at first may turn brackish or dry up.

In case the well begins to dry out over a period of time one of several means may be resorted to in order to keep up the functioning of the system.

1. The pump may be removed, and the same well redrilled deeper.

2. A well in another part of the basement or in another location may be drilled, and the pump installed in the new location.

3. A storage tank may be constructed. This storage tank consists of a huge hole dug in the basement and lined heavily with concrete. During off periods when the air-conditioning system is not in operation water from the weak well may be pumped into this tank.

When the level in the well decreases below a certain point as determined by a level switch connected to the pump, the motor stops and the flow ceases. By this means the level of water in the well may

(Concluded on Page 21, Column 1)

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● Here is a reliable recording thermometer at a price you can afford. Only $18! Designed particularly for service work. You must see it to appreciate its exclusive features; to learn why it is easy to operate. Hundreds use Practical thermometers to check refrigerators, air-conditioners, etc. Find out all about this instrument. Ask your jobber or write to us.

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CADILLAC SQUARE AND BATES STREET

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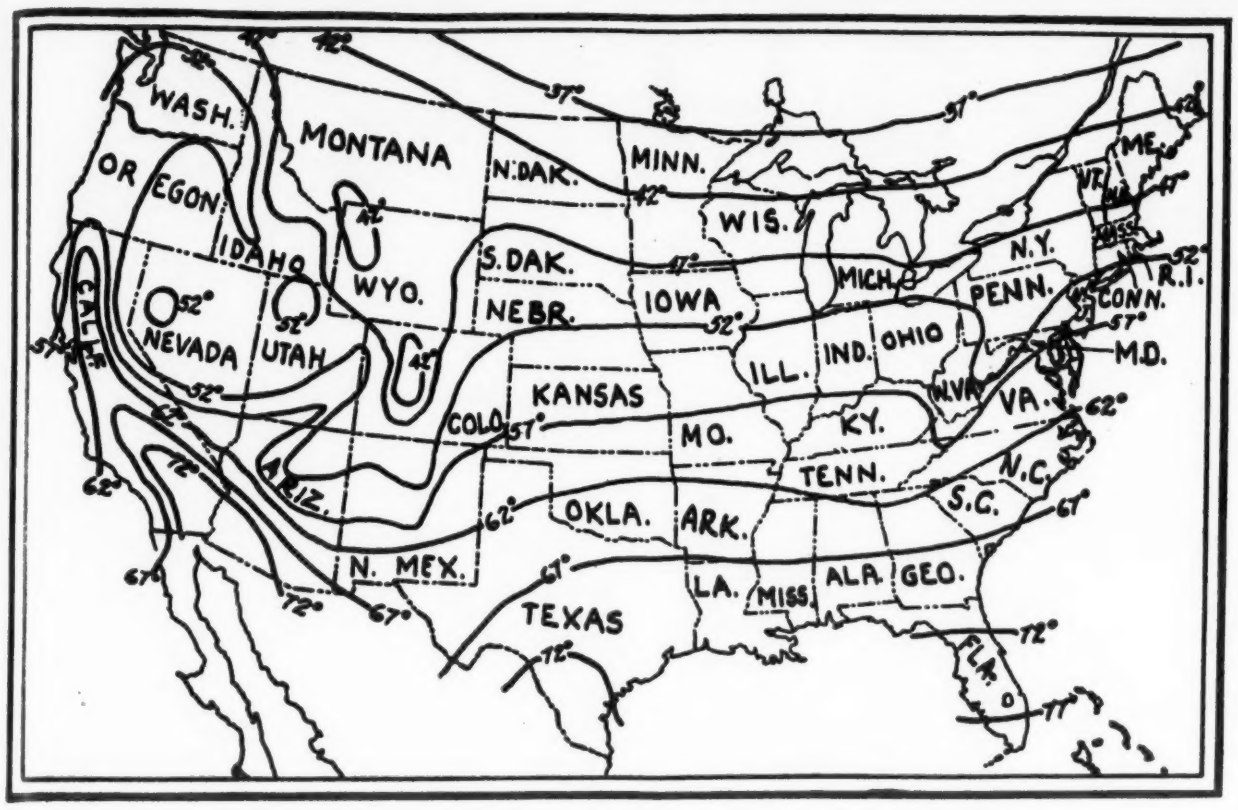
$2.50 FROM DAILY
ALL WITH BATH

Fig. 1—Approximate Well Water Temperatures for United States



Problems Solved in Selecting Coils, Fans, Ducts and Controls for Well Water Air-Conditioning Systems

(*Concluded from Page 20, Column 5*)

vary considerably, and yet the water which does seep in is removed and stored in the large tank nearby.

When the air-conditioning installation is ready to operate, water is first pumped from the storage tank through the coils before being pumped from the well proper.

Well drilling costs generally range from $2 to $10 per foot, and depths may vary from 30 feet to 100 feet. This information must be obtained locally.

If thorough investigations indicate the probability of water whose temperature, quantity, and quality are suitable, the prospective owner of well water air conditioning may start his gamble by hiring a well-driller to go prodding about the premises. If a suitable supply of well water eventually is struck, the installation of the air-conditioning system and equipment may be begun.

Equipment Required for Well Water Installation

Estimates of sensible and latent cooling loads must be made in some acceptable manner, and the equipment selected accordingly.

The equipment required generally is as follows:

1. Water circulating pump—for lifting a sufficient quantity of water from the well and circulating it through the coil to place of disposal.

2. Piping, for the water circulation system.

3. Air-conditioning coil, for cooling and dehumidifying the air.

4. Air-circulating fan, for circulating the air through the air-conditioning coil, and the air-distribution system.

5. Duct and grilles, for circulating the air to and from the conditioned areas.

6. Controls, for regulating the output of the equipment to balance the load.

7. Filters, and other accessories.

Advisable to Circulate Considerable Quantity

Since the well water cost is relatively low (once the well is completed), it generally is advisable to circulate a considerable quantity of water in order to obtain maximum heat transfer through the air-conditioning coil. Large quantities of water circulated increase coil capacities because higher water velocity improves the heat transfer coefficient of the coil, and reduces the average water temperature within the coil as well.

Recommended water circulation for this service generally is not less than four gallons per minute per ton of total refrigerating effect, which corresponds to a water temperature rise through the coil of 6°. The pump and piping should be selected upon this basis, remembering that the pump must work against a water head equal to the "lift" from the well, plus the friction through the water circulation system (including the coil) and the net head to which it must be elevated.

Problem of Selecting Coil of Proper Size

The air-conditioning coil must be selected so that it has the proper sensible and latent capacities to balance the sensible and latent loads respectively at the average water temperature within the coil, and at the temperature and humidity of the entering air.

As a rule it is necessary to employ an air-conditioning coil whose depth in direction of airflow is in the neighborhood of 12 inches deep, in order to obtain the required proportion of latent work with well water, because its temperature generally is relatively high as refrigerating temperatures go.

The face area of the coil may be determined by allowing an air velocity through the coil of 400 or 500 feet per minute. The manifold, or header through which the well water is supplied to the air-conditioning coil should be arranged that at the quantity of water circulation used, the water velocity through the tubes of the coil is not less than 200 feet per minute, with 300 f.p.m. being a better figure.

Under these conditions, the average type of coil should deliver somewhat less than one ton of refrigerating effect per square foot of face area.

Circulating Fan & Ducts Must Have More Air

The circulating fan and ducts must have ample capacity to deliver sufficient air to the conditioning area to enable the coil to deliver the required refrigerating effect and to convey the required refrigerating effect at practicable temperature differentials.

Actual air circulation required per ton of refrigerating effect will be greater for higher well water average temperatures, for shallower coils in direction of airflow and for wider coil fin spacings.

For average conditions, air requirements are about as follows:

Average Well Water Temp.	Cu. Ft. Per Minute Of Air Per Ton
45	300
50	400
55	500
60	600

The automatic temperature control most generally used for the well water system consists of a room thermostat which stops the pump or restricts the water flow through the air-conditioning coil upon falling room temperatures.

Carrier Equipment Used to Control Conditions in Milling Plant

INDIANAPOLIS—Carrier air-conditioning equipment consisting of a humidifier, heating coils, fans, dew-point controls, and room controls, has been installed in the Acme Evans Milling Co. plant here to provide year-around uniform humidity and temperature.

Affecting the third through the eighth floors of the milling plant, the air-conditioning installation makes possible the production of uniform flour and reduces "invisible loss" caused by the blowing away of dried particles of flour, milling company officials state.

It is also claimed that the air conditioning eliminates coal soot, dust, and other foreign material from the finished product.

New Chicago Apartment to Be Air Conditioned

CHICAGO—First new apartment building here to have complete air conditioning is scheduled to be ready for occupancy on May 1, 1938. Located at 7524-38 Yates Ave., the building will contain 96 apartments and a five-room penthouse.

American Express Co. Cools Philadelphia Office

PHILADELPHIA — First travel office in Philadelphia to be equipped with a complete air-conditioning system is the Chestnut St. office of American Express Co., where both street and second floors are cooled.

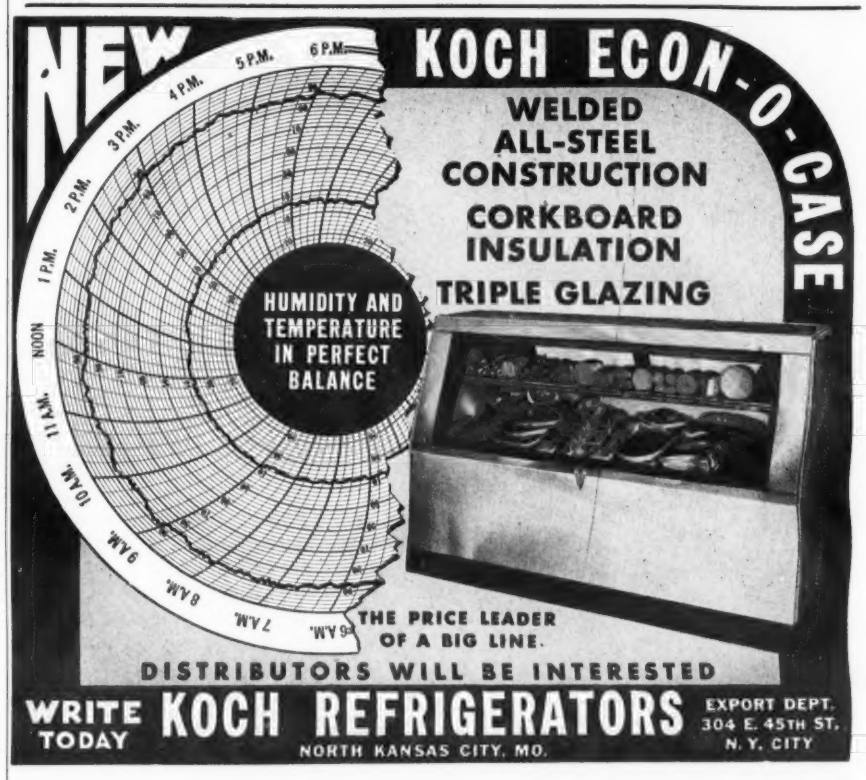
A 3-hp. fan is used to circulate the air from a central plant conditioner; cooling and dehumidification is accomplished by a 20-hp. condensing unit. Entire equipment is enclosed in a penthouse on the roof, and booster pump is included in the system in order to avoid a shortage of condensing water.

Trane Bulletin Offers Heating System Data

LA CROSSE, Wis.—Trane Co., manufacturer of cooling, heating, and air-conditioning equipment, has issued a new bulletin describing its line of heating specialties.

In addition to listing, illustrating, and giving complete specifications of the Trane line of equipment for steam heating systems, the bulletin describes the process of bellows manufacture, gives considerable data on vapor heating systems, split systems, and vacuum systems, and describes several typical piping connections.

THE BUYER'S GUIDE



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$5,000,000 Appliance Market on Farms Is Cited by Cameron

DETROIT—A $5,000,000 market for electrical household appliances in America's rapidly improving farms is foreseen by Ralph C. Cameron, head of the household appliance department of Kelvinator division, Nash-Kelvinator Corp.

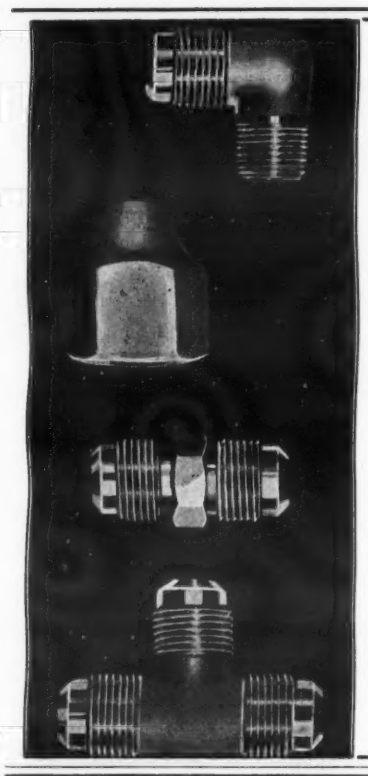
"Millions of dollars are going into the purchase of electric washing machines and ironers, electric ranges, and electric refrigerators for the farm wife," Mr. Cameron states. "The most closely knit market for electrical appliances is in the biggest farm area—Pennsylvania, Ohio, and Michigan.

"Exactly 300,000 electrified farms, or one-fourth of the nation's total, are expected to be found within the boundaries of these states at the end of 1937, and the housewives in these farms are preparing to buy 70,000 electric refrigerators and 40,000 electric ranges."

Kansas City Association Simplifies Its Name

KANSAS CITY, Mo.—Electric and Radio Association of Kansas City has changed its title to Electric Association of Kansas City, reasons being desire for brevity and simplicity in advertising and promotion, for uniformity with other electrical organizations, and for a broader, more inclusive term.

THE BUYER'S GUIDE



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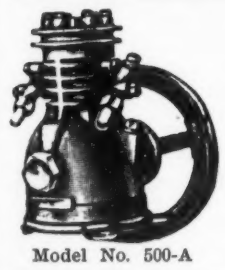

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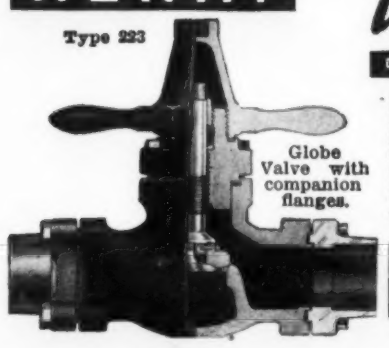

Globe Valve with companion flanges.

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Has patented, rotating, self-aligning, tapered, brass stem-disc. Resilient packing can be repacked under pressure. Wing cap can be inverted and its socket used to operate valve. Cap sealing on bonnet provides additional protection against leaks. Unrestricted flow. Valves may be obtained with screw ends, or with Solder fittings, or with various types of companion flanges.
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Stocked By Leading Jobbers

Porcelain Enamel Institute Votes to Expand Research Program, Advertising & Promotion of Products

CHICAGO—An expanded program of advertising, promotional, and research activities, including trade and technical paper and direct-mail advertising and the continuation of research fellowships at Ohio State university and the National Bureau of Standards, was mapped by members of Porcelain Enamel Institute at their seventh annual meeting recently.

Officers elected for the coming year were:

F. E. Hodek, Jr., General Porcelain Enameling & Mfg. Co., Chicago, president; H. D. Chase, Chicago Vitreous Enamel Product Co., vice president in charge of advertising and promotion; Richard H. Turk, Porcelain Enamel & Mfg. Co., Baltimore, vice president in charge of research; Wm. Hogenson, Chicago Vitreous Enamel Product Co., treasurer; and George P. MacKnight, managing director of the Institute, secretary.

EXECUTIVE COMMITTEE

The executive committee of the Institute for 1937-38 will consist of the officers, with the exception of the secretary, and the following; George S. Blome, Baltimore Enamel & Novelty Co., Baltimore; Robert G. Calton, Tennessee Enamel Mfg. Co., Nashville; Edgar H. Weil, Vitreous Steel Products Co., Cleveland; Rudolf W. Staud, Benjamin Electric Mfg. Co., Des Plains, Ill.

P. B. McBride, Porcelain Metals Corp., Louisville; Ernest Richardson, Ingram-Richardson Mfg. Co., Beaver Falls, Pa.; W. Russell Greer, Porcelain Enamel & Mfg. Co., Baltimore; R. A. Weaver, Ferro Enamel Corp., Cleveland; W. F. Wenning, Ceramic Color & Chemical Mfg. Co., New Brighton, Pa., and H. V. Mercer, American Rolling Mill Co., Middletown, Ohio.

FORUM PROGRAM

At the second annual P. E. I. Forum, held at Ohio State university on the three days following the annual meeting and conducted by Mr. Hodek, Prof. A. I. Andrews, University of Illinois, and Prof. R. M. King, Ohio State university, more than 250 were present.

First day of the organization's annual meeting was devoted to a sales conference of the industry, with sectional chairman making the presentations. President R. G. Calton opened the meeting, and introduced E. L. Laiser of the Titanium Alloy Mfg. Co., who talked on "What the Educational Bureau has done in 1937."

Mr. Lasier, in citing general business gains of 38.1% over 1932 for the first three-quarters of 1937, pointed out that the porcelain enameling industry's gains in the same period have been 110%. Industry sales for 1937, as estimated on first three-quarters' activity, will approximate $22,000,000, he said. Sales in 1936 approximated $17,000,000. These figures, Mr. Lasier said, are for the jobbing shop, sign, breakfast set and table top, and frit divisions of the industry only.

INDUSTRY'S MARKET

"Market Research and the Industry's Markets," was the subject presented by George S. Blome of the Baltimore Enamel & Novelty Co., chairman of the Institute's market research section. Through the use of six charts Mr. Blome showed that the sales of various porcelain enameled products for 1936 and a given number of months for 1937 were as follows:

Household electric refrigerators—1936—1,595,806 units; eight months of 1937—1,877,975.

Washing machines—1936—1,204,227 units; eight months of 1937—1,245,520.

Ironers—1936—125,548 units; 8 months of 1937—128,589.

Commercial electric refrigerators—1936—$11,856,000; eight months of 1937—$15,200,000.

Gas ranges—1936—$67,110,000; six months of 1937 (only figures now available)—$38,450,000.

Electric ranges — 1936 — 202,987 units; eight months of 1937—284,043.

Table tops and breakfast sets—1936—$2,795,678; eight months of 1937—$1,980,592.

Signs — 1936 — $2,974,174; eight months of 1937—$2,059,980.

Architectural porcelain enamel — 1936—estimated at $1,000,000; total sales for 1937 were estimated on first three-quarters' activity at $1,500,000.

REPORT ON RESEARCH

"The How and Why of Technical Research" was the subject of Richard H. Turk's report, as chairman of the technical research section.

Earle S. Smith, of the Toledo Porcelain Enamel Products Co., chairman of the industry, trade and consumer contact section, reported that a number of department store and trade show demonstrations had been conducted since the last annual meeting of the Institute.

Prominent among the latter have been the American Gas Association exhibit, National House Furnishings Show, National Oil Marketers' Show, Toledo Home Show, Chicago House and Garden Exhibition, Illinois Hardware Retailers' Show, American Association of Home Economics Instructors' Show, and others.

ALL-PORCELAIN KITCHEN

He also pointed out that the Institute had developed for the first time an all-porcelain enamel kitchen. Mr. Smith also told of the production of a new sound-slide film known as "The Lifetime Finish," and that more than 30 copies of this film are now in active use by manufacturers of porcelain enameled products.

Advertising and promotion plans were presented by H. D. Chase, of the Chicago Vitreous Enamel Product Co., chairman of the advertising and sales promotion section. He was assisted by R. B. Williams, who represented the Institute's advertising agency.

EDUCATIONAL LITERATURE

He emphasized in dramatic fashion the fact that nearly 70,000 pieces of literature had been distributed by the Institute office during the first eight months of 1937, principally as a result of advertising which has been carried this year in retail trade and technical publications.

He also emphasized the fact that the industry's sales had increased considerably more than the sales of general business for the first eight months of this year, and pointed out that even though there was no definite evidence to prove it, the only effort which the industry had made to increase its sales was through the Advertising and Sales Promotion Section.

ADVERTISING PROGRAM

For 1938 he proposed continuation of the section's activities, with the increased use of trade paper and direct-by-mail advertising. In this connection, he proposed definite campaigns for each group of the Institute during 1938, and announced that a new sales manual for retail store sales persons had been prepared by his section and would soon be distributed.

Reports were made by the Institute treasurer, William Hogenson, of the Chicago Viterous Enamel Product Co., and by George P. MacKnight, managing director and secretary of the organization.

Charles R. Stevenson, senior partner of Stevenson, Jordan and Harrison, a firm of management engineers which has been working with the industry for a number of years, spoke on "Economic Trends and Government Influence."

Other principal speakers on the program of the annual meeting were Franklyn Hobbs, economist, who spoke on "Industrial Operations and Government Influence," and Prof. King, the Institute's technical director, who talked on the use of porcelain enamel in the architectural field.

Boyle Returns to Servel Offices in Evansville

EVANSVILLE, Ind. — Howard S. Boyle, sales promotion manager of Servel, Inc., who for the past seven years maintained his headquarters in New York, has returned to Evansville offices of the company.

Farmer First Equips Home with Electric Appliances

CHICAGO — That the American farmer equips his house with electrical appliances before he applies electricity to production on the farm was indicated in a report delivered here recently by Dr. E. A. White, director of the Committee on the Relation of Electricity to Agriculture.

Based on the first engineering analysis completed by the committee, Dr. White's report was presented to representatives of farm organizations, manufacturers, utilities, agricultural engineers, and university extension services at the committee's fourteenth annual meeting.

The analysis made by the committee covered all of the 140 farms on three Wisconsin rural power lines, and 39 selected farms in Louisiana, Ohio, Tennessee, Virginia, Illinois, Michigan, and Indiana.

Among the electrical household appliances in use on the 140 Wisconsin farms, the survey showed the following percentages of saturation: radio 93%, ironer 88%, washing machine 88%, toaster 45%, vacuum cleaner 29%, water system 27%, range 21%, and refrigerator 21%. The number of electric water heaters and fans was surprisingly low.

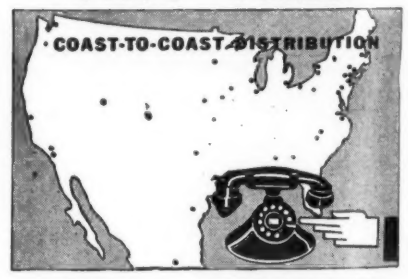
Analysis of lighting facilities on these farms showed that of the 4,190 lamps in use 48.9% were 25 watts or smaller. Only 2.1% were above 100 watts, and these were used mostly for yard lighting.

The report reached the conclusion that, with present equipment, a farm can use 6,000 kwh. per year for household purposes and lighting alone.

In contrast to the showing of domestic current consumption, it was found that electric applications for production represented only about 10% of the total use of electric service. In line with this finding, the report showed that the percentage of saturation of electrical applications outside the house was low.

In explanation of why so little electricity is used for productive purposes, the report surmised that "perhaps electrically operated equipment for productive enterprises is not as well developed from an engineering standpoint as household equipment. Perhaps discouraging the use of anything larger than a 5-hp. motor has retarded development."

ANY TIME



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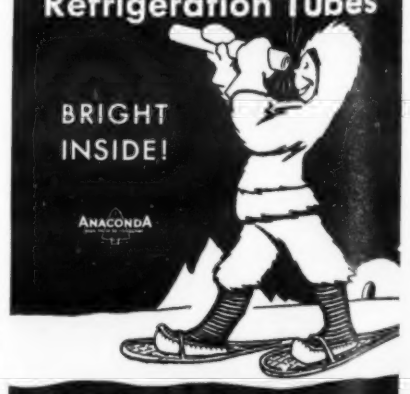

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SERVICE METHODS

Xylene Used to Clean Corroded Refrigeration Systems

By K. M. Newcum

Xylene, a highly efficient solvent, is serving a very useful function in cleaning gummed or stuck-up refrigeration systems. It is charged into the crankcase with the oil and tends to dissolve the gummy substances that cause compressors to stick up and other parts of the system to work sluggishly.

Moisture in a refrigeration system tends to cause corrosion. The corrosion may be from the breaking down of the oil, or deposits on the metal surfaces caused by the acid formed by the presence of moisture in the refrigerant.

The removal of the moisture is best effected by the use of a chemical drier, the removal of the corrosion usually requires a complete overhauling in the shop.

Corrosion that has extended throughout the entire system is difficult and expensive to remove. In most cases of a stuck-up job it is necessary to overhaul completely the condensing unit and other moving parts, then clean and dehydrate the entire system, including the tubing, valves, fittings, etc.

Upon questioning several competent service men it was learned that if the compressor was not stuck beyond movement, the addition of Xylene gradually relieved the sticking condition and allowed the system to return to normal operation.

The quantity of Xylene to be added to a system depends largely upon the extent of the corrosive condition, and the amount of oil and refrigerant. Some service men find it necessary to add up to one half an ounce for each pound of refrigerant in the system. They generally start with small quantities and increase the dose as necessary to relieve the condition.

What Xylene actually does is to dissolve the sludge, hence remove it from the wearing surfaces and permit free movement of the parts. That the Xylene should be eventually removed from the system is a foregone conclusion. If not removed the sludge may eventually gum up and cause a repetition of the sticking condition.

Common practice is to allow the Xylene to remain in the system until the compressor again runs freely. After this time the complete oil and refrigerant charge is removed and the crankcase washed clean with new Xylene. A new oil and refrigerant charge is then added and a drier installed in the system, when it is put back into operation.

Some service men add Xylene to a sticking system, allow it to operate a few days, then remove the entire system to the shop for a complete overhauling and baking. They claim that the Xylene circulating with the refrigerant and oil cleans the internal parts of the systems, thus saving time in the shop.

Xylene has been added to systems and never removed. This may be the exception to the rule, but good logic would seem to be in favor of removing the Xylene after it has served its purpose.

Many Students Register For Air Conditioning In Washington

WASHINGTON, D. C.—The new course in modern air conditioning, design and installation, offered by Columbia Technical Institute, Washington, D. C., has received an unusually heavy registration, bearing out the school's belief that there is a great future for the fast-growing industry, reports Principal P. J. Leverone.

The course includes a fundamental training in mathematics, physics, drafting, and blueprint reading, as well as specialized training in air-conditioning engineering. It is completed in nine months, with attendance three evenings a week, and is conducted by instructors who are actually engaged in the practical work by Washington's leading concerns. A school rule provides that all instructors must be actively engaged in the subject they teach.

A modern air-conditioning system is to be used for the practical instruction in the subject.

Saylor-Beall Markets New Spray Gun

DETROIT—A new type of commercial spray gun which is said to effect a considerable saving in air in the application of lacquers, enamels, and other fast drying materials, has just been announced by Saylor-Beall Mfg. Co.

With this external atomizing gun, the paint material leaves the nozzle orifice enveloped in a tube of air, as in the ordinary spray gun. Then, instead of being played upon by a number of air streams from several port sides, it receives two blasts that are softened as they slide off baffle plates, spreading the pattern, the manufacturer claims.

Only these two auxiliary air streams are required to complete atomization and produce the desired oblong pattern, it is said, permitting efficient paint coverage in shorter time.

Gun is of the shut-off type for use with air storage tank. Five sizes of nozzles are available.

Imperial Perfects Solder & Flux for Work on Aluminum

CHICAGO—A new all-metal solder and flux, claimed to provide a high-tensile strength bond for use with aluminum, stainless steel, monel, cast iron, zinc base die castings, copper, brass and other metals has just been announced by The Imperial Brass Mfg. Co.

The solder melts at approximately 500° F. and may by applied with a blow torch, welding torch or large soldering iron. Typical of the uses of this new solder and flux advanced by Imperial engineers is for the soldering of stainless and aluminum evaporators and ice cube trays.

Imperial all-metal solder and flux is the name of the new product and it will be sold in a kit containing the solder and flux, also emery cloth and directions for use.

Detroit Firm Makes New Gasket Material for Use with Refrigerants

DETROIT—A new gasket material known as D-G 48 has been introduced by Detroit Gasket & Mfg. Co.

This material is a compound of asbestos fibre with a non-rubber binder developed particularly for applications involving contact with sulphur dioxide, methyl chloride, or Freon. In such applications the sulphur content of rubber composition gaskets has been found to tarnish bronze and copper parts sufficiently to impair the efficiency of the unit.

D-G 48 is said to possess sealing qualities, strength, and durability superior to rubber composition gaskets, and to be completely free from any tarnishing effect.

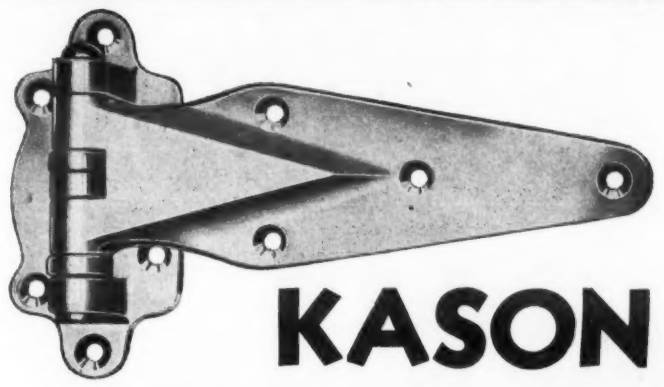
Keefe Cites Opportunities Offered Young Men by Air Conditioning, Aviation, Television Industries

BUFFALO—"The creation of new products and new industries, such as air conditioning, stratosphere aviation, and television, is creating unlimited opportunities today and tomorrow for technically skilled men who are smart enough to ride to success with the progress of American industries," said William D. Keefe, sales manager of the refrigeration division of Fedders Mfg. Co., in his address to the New York State Teachers Associated Convention here Oct. 29.

Mr. Keefe's speech, "What Industry Expects From Vocational Apprentices," touched upon the various ways in which present leaders of industry are encouraging apprentices and vocational students to increase their knowledge and recognize their opportunities.

"Believe it or not," he said, "the biggest job in industry is to find the right man. That is why opportunities are unlimited. The eyes of industry are focused on the vocational student."

Mr. Keefe emphasized the value of trade papers as a medium for students to keep up to date on their information, and urged the assembled teachers to cooperate by visiting industrial plants of different kinds and obtaining first-hand knowledge of the practical side of vocational work.



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